

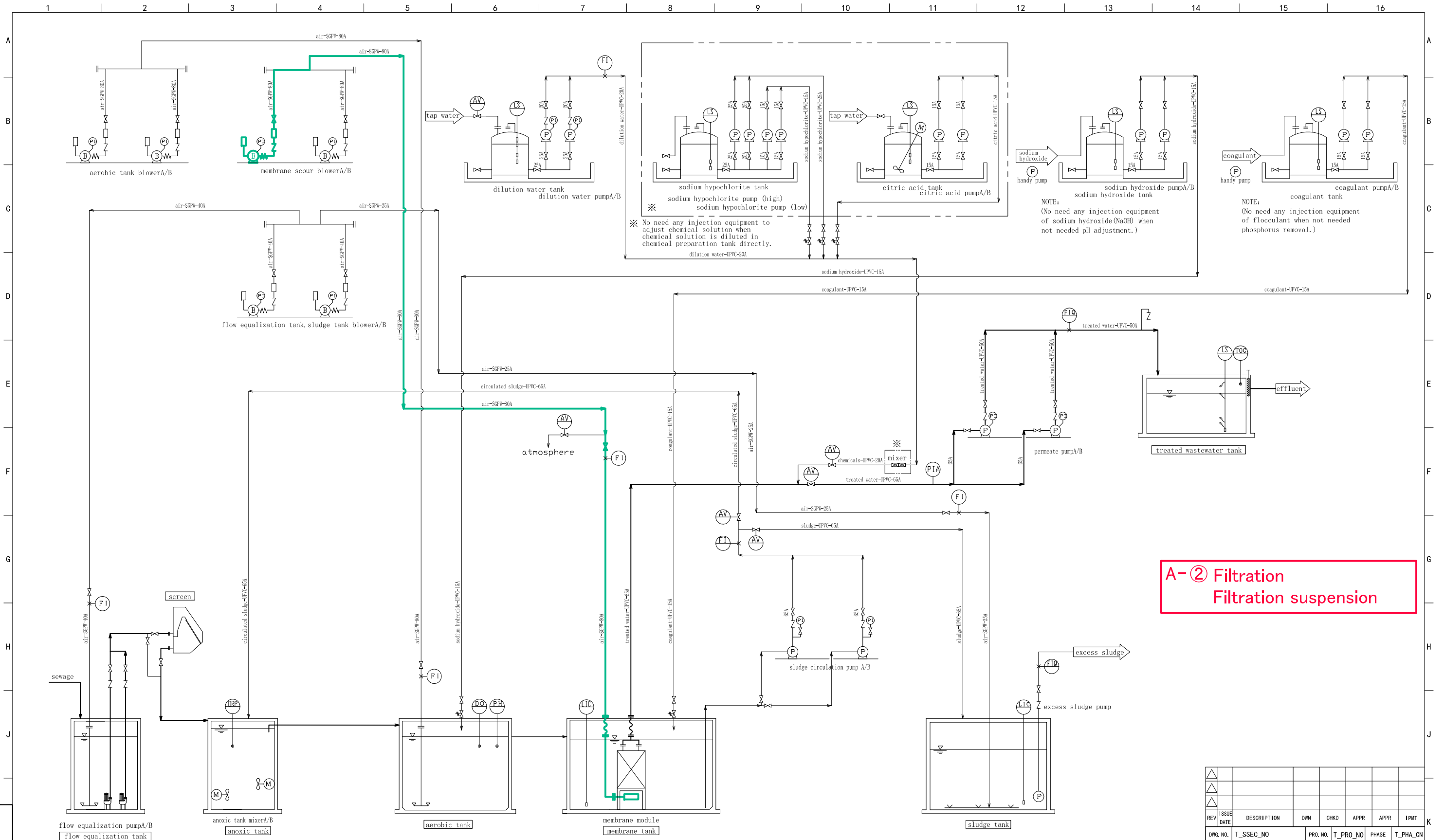
**A-① Filtration
Filtration operation**

TAG No.	name	membrane module	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
Qty.	1 set	1	1	1	1	1	1	1	1	1	1	1	1+1 set
spec.	500m ²	2.2mX4mX4mH(effective)	2.2mX5mX4mH(effective)	2.2mX1.7mX4mH(effective)	1	33.3m ³ (effective)	50L	50L	1500L	4000L	400L	0.17m ³ /minX10mHX0.75kW	
liquid	activated sludge	activated sludge	activated sludge	activated sludge	activated sludge	sewage	sodium hypochlorite	citric acid	water	sodium hydroxide	coagulant	treated water	
type	50M0500FF						resin	resin	resin	resin	resin	self priming pump	

TAG No.	name	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
Qty.	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1
spec.	0.2L/minX0.2MPax0.02kW	1.2L/minX0.45MPax0.1kW	0.7L/minX0.7MPax0.1kW	0.2L/minX0.2MPax0.02kW	17mL/minX1MPax0.02kW	0.03m ³ /minX11.3mHX0.4kW	0.28m ³ /minX7mHX1.5kW	0.14m ³ /min	3.2m ³ /minX50kPax5.5kW	3.1m ³ /minX50kPax5.5kW	0.8m ³ /minX50kPax2.2kW	5.6m ³ /min 175N	0.14m ³ /min spacing0.5mm	
liquid	sodium hypochlorite	sodium hypochlorite	citric acid	sodium hydroxide	coagulant	water	circulated sludge	sewage	air	air	air	activated sludge	sewage	
type	metering pump	metering pump	metering pump	metering pump	metering pump	centrifugal pump	centrifugal pump	submersible pump	roots blower	roots blower	roots blower	submersible mixer		

REV	ISSUE DATE	DESCRIPTION	DWN	CHKD	APPR	APPR	IPMT
DWG. NO.	T_SSEC_NO	PRO. NO.	T_PRO_NO	PHASE	T_PHA_CN		
MITSUBISHI RAYON AQUA SOLUTIONS							
<p><i>This document / drawing is the property of Owner (Project) or its affiliated companies and contains confidential information of Owner. Any use or copying hereof is subject to the prior approval of Owner.</i></p>							
200M3 / D							
P&ID (FF)							
SCALE	NONE	DWG. NO.	T_NO	MDA16-14	REV	T_REV	

DISC.	SIGN.	DATE
COUNTERSIGNED		



**A-② Filtration
Filtration suspension**

DISC.	SYCN.	DATE
COUNTERSIGNED		

TAG No.	name	membrane module	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
Qty.	1 set	1	1	1	1	1	1	1	1	1	1	1	1+1 set
spec.	500m ²	2.2mX4mX4mH(effective)	2.2mX5mX4mH(effective)	2.2mX17mX4mH(effective)	1	33.3m ³ (effective)	50L	50L	1500L	4000L	400L	0.17m ³ /minX10mHX0.75kW	
liquid	activated sludge	activated sludge	activated sludge	activated sludge	activated sludge	sewage	sodium hypochlorite	citric acid	water	sodium hydroxide	coagulant	treated water	
type	50M0500FF						resin	resin	resin	resin	resin	self priming pump	

TAG No.	name	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
Qty.	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1
spec.	0.2L/minX0.2MPax0.02kW	1.2L/minX0.45MPax0.1kW	0.7L/minX0.7MPax0.1kW	0.2L/minX0.2MPax0.02kW	17mL/minX1MPax0.02kW	0.03m ³ /minX1.3mHX0.4kW	0.28m ³ /minX1.7mHX1.5kW	0.14m ³ /min	3.2m ³ /minX50kPaX5.5kW	3.1m ³ /minX50kPaX5.5kW	0.8m ³ /minX50kPaX2.7kW	5.6m ³ /min 175N	0.14m ³ /min spacing0.5mm	
liquid	sodium hypochlorite	sodium hypochlorite	citric acid	sodium hydroxide	coagulant	water	circulated sludge	sewage	air	air	air	activated sludge	sewage	
type	metering pump	metering pump	metering pump	metering pump	metering pump	centrifugal pump	centrifugal pump	submersible pump	roots blower	roots blower	roots blower	submersible mixer		

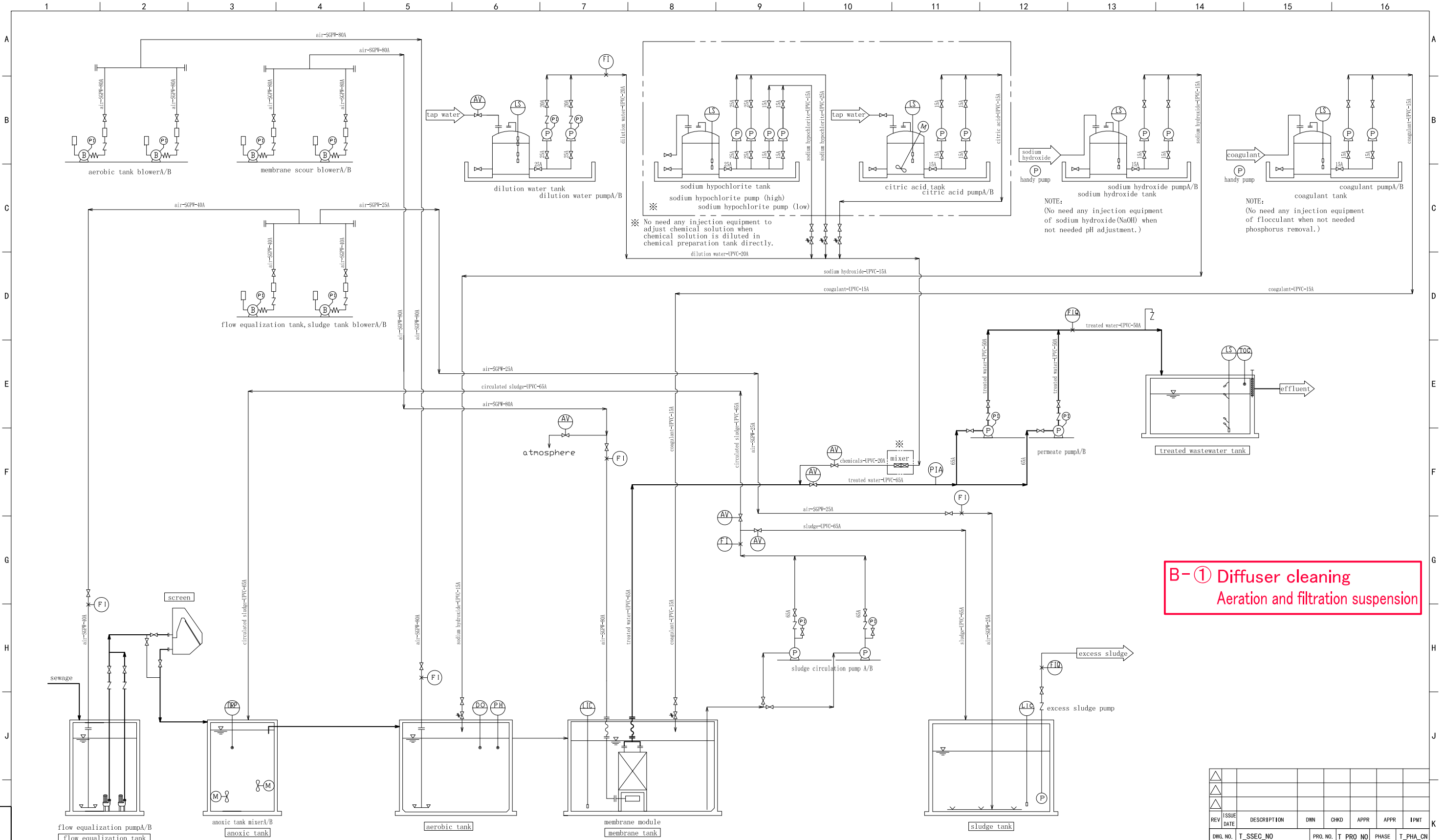
REV	ISSUE DATE	DESCRIPTION	DWN	CHKD	APPR	APPR	IPWT



This document / drawing is the property of Owner (Project) or its affiliated companies and contains confidential information of Owner. Any use or copying hereof is subject to the prior approval of Owner.

200M3 / D
P&ID (FF)

SCALE NONE	DWG. NO. T_NO MDA16-14	REV T_REV
------------	------------------------	-----------



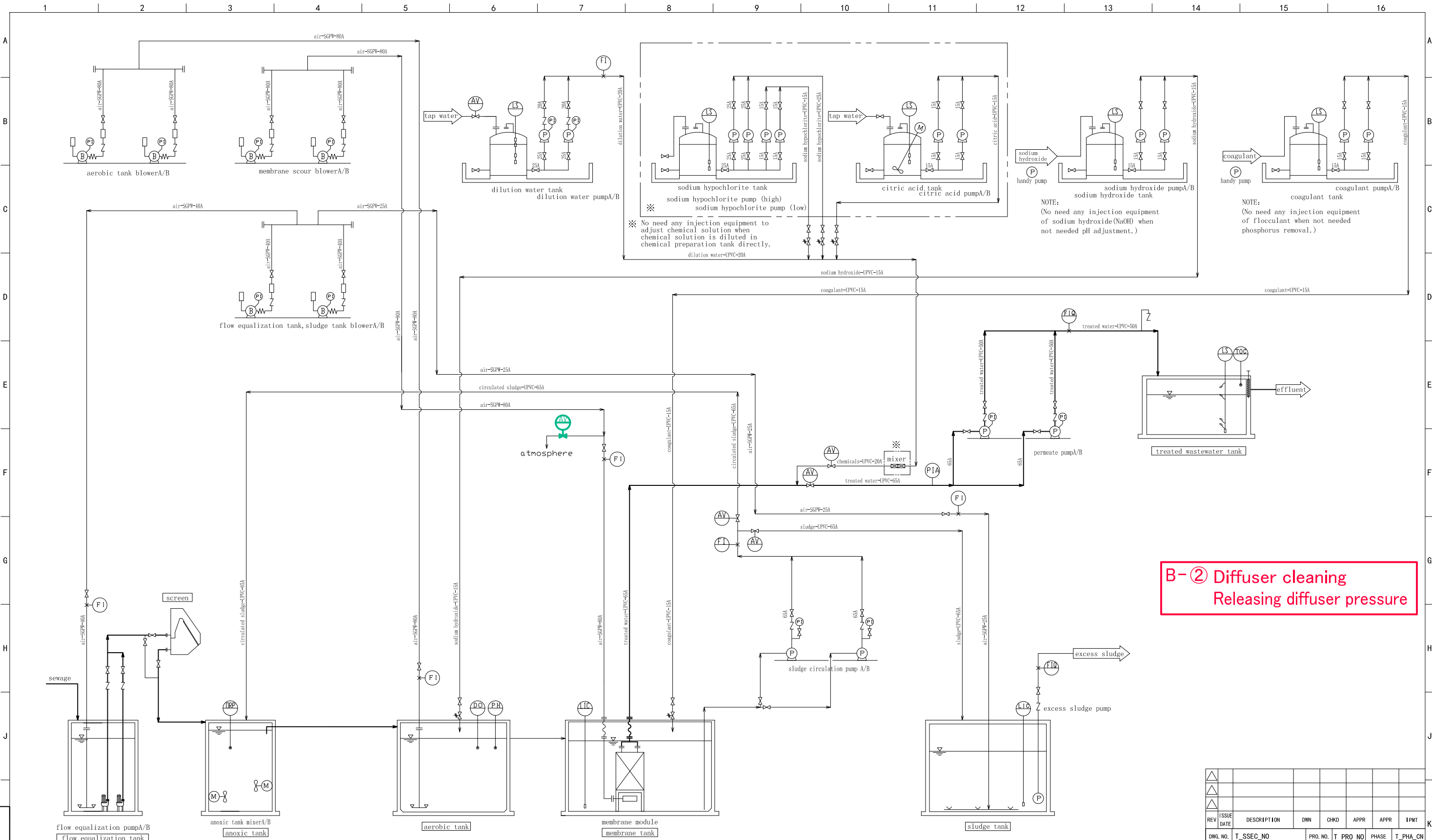
**B-① Diffuser cleaning
Aeration and filtration suspension**

TAG No	name	membrane module	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
Qty.	1 set	1	1	1	1	1	1	1	1	1	1	1	1+1 set
spec.	500m ²	2.2mX4mX4m(Effective)	2.2mX5mX4m(Effective)	2.2mX1.7mX4m(Effective)	1	33.3m ³ (Effective)	50L	50L	1500L	4000L	400L	0.17m ³ /minX10mHX0.75kW	
liquid	activated sludge	activated sludge	activated sludge	activated sludge	activated sludge	sewage	sodium hypochlorite	citric acid	water	sodium hydroxide	coagulant	treated water	
type	50M0500FF						resin	resin	resin	resin	resin	self priming pump	

TAG No	name	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
Qty.	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1
spec.	0.2L/minX0.2MPax0.02kW	1.2L/minX0.45MPax0.1kW	0.7L/minX0.7MPax0.1kW	0.2L/minX0.2MPax0.02kW	17mL/minX1MPax0.02kW	0.03m ³ /minX1.3mHX0.4kW	0.28m ³ /minX1.7mHX1.5kW	0.14m ³ /min	3.2m ³ /minX50kPaX5.5kW	3.1m ³ /minX50kPaX5.5kW	0.8m ³ /minX50kPaX2.2kW	5.6m ³ /min 175N	0.14m ³ /min spacing0.5mm	
liquid	sodium hypochlorite	sodium hypochlorite	citric acid	sodium hydroxide	coagulant	water	circulated sludge	sewage	air	air	air	activated sludge	sewage	
type	metering pump	metering pump	metering pump	metering pump	metering pump	centrifugal pump	centrifugal pump	submersible pump	roots blower	roots blower	roots blower	submersible mixer		

DISC.	SYCN.	DATE
COUNTERSIGNED		

REV	ISSUE DATE	DESCRIPTION	DWN	CHKD	APPR	APPR	IPMT
DWG. NO. T_SSEC_NO			PRO. NO. T_PRO_NO		PHASE		T_PHA_CN
MITSUBISHI RAYON AQUA SOLUTIONS							
<p><i>This document / drawing is the property of Owner (Project) or its affiliated companies and contains confidential information of Owner. Any use or copying hereof is subject to the prior approval of Owner.</i></p>							
200M3 / D							
P&ID (FF)							
SCALE NONE		DWG. NO. T_NO		MDA16-14		REV T_REV	



B-② Diffuser cleaning
Releasing diffuser pressure

TAG No.	name	membrane module	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
Qty.	1 set	1	1	1	1	1	1	1	1	1	1	1	1+1 set
spec.	500m ²	2.2mX4mX4mH(effective)	2.2mX5mX4mH(effective)	2.2mX1.7mX4mH(effective)	1	33.3m ³ (effective)	50L	50L	1500L	4000L	400L	0.17m ³ /minX10mHX0.75kW	
liquid	activated sludge	activated sludge	activated sludge	activated sludge	activated sludge	sewage	sodium hypochlorite	citric acid	water	sodium hydroxide	coagulant	treated water	
type	50M0500FF						resin	resin	resin	resin	resin	self priming pump	

TAG No.	name	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
Qty.	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1
spec.	0.2L/minX0.2MPax0.02kW	1.2L/minX0.45MPax0.1kW	0.7L/minX0.7MPax0.1kW	0.2L/minX0.2MPax0.02kW	17mL/minX1MPax0.02kW	0.03m ³ /minX11.3mHX0.4kW	0.28m ³ /minX7mHX1.5kW	0.14m ³ /min	3.2m ³ /minX50kPax5.5kW	3.1m ³ /minX50kPax5.5kW	0.8m ³ /minX50kPax2.2kW	5.6m ³ /min 175N	0.14m ³ /min spacing0.5mm	
liquid	sodium hypochlorite	sodium hypochlorite	citric acid	sodium hydroxide	coagulant	water	circulated sludge	sewage	air	air	air	activated sludge	sewage	
type	metering pump	metering pump	metering pump	metering pump	metering pump	centrifugal pump	centrifugal pump	submersible pump	roots blower	roots blower	roots blower	submersible mixer		

REV	ISSUE DATE	DESCRIPTION	DWN	CHKD	APPR	APPR	IPMT
DWG. NO.	T_SSEC_NO	PRO. NO.	T_PRO_NO	PHASE	T_PHA_CN		

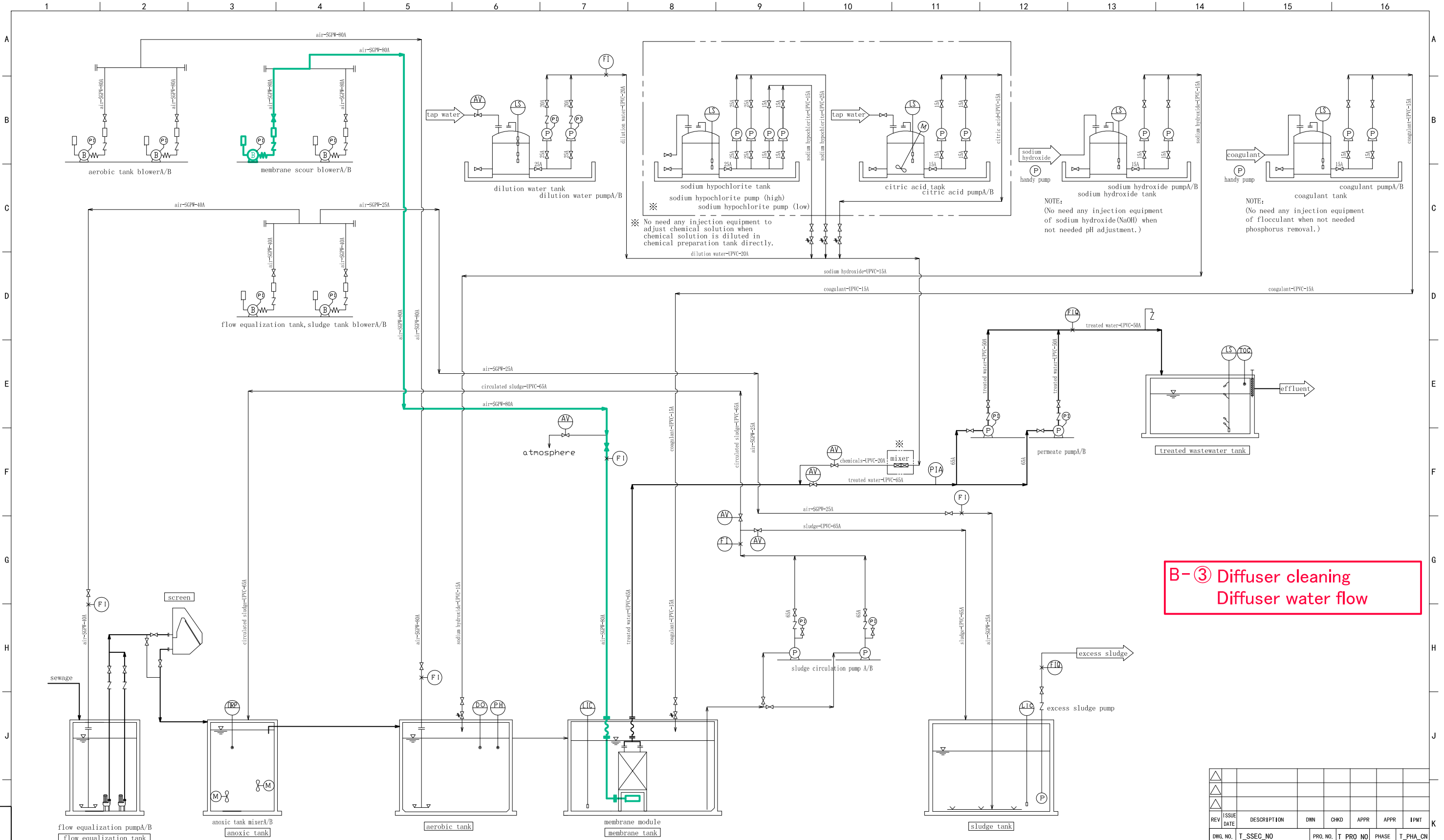
MITSUBISHI RAYON AQUA SOLUTIONS

This document / drawing is the property of Owner (Project) or its affiliated companies and contains confidential information of Owner. Any use or copying hereof is subject to the prior approval of Owner.

200M3 / D
P&ID (FF)

SCALE	DWG. NO.	T_NO	MDA16-14	REV	T_REV
NONE					

DISC.	SIGN.	DATE
COUNTERSIGNED		



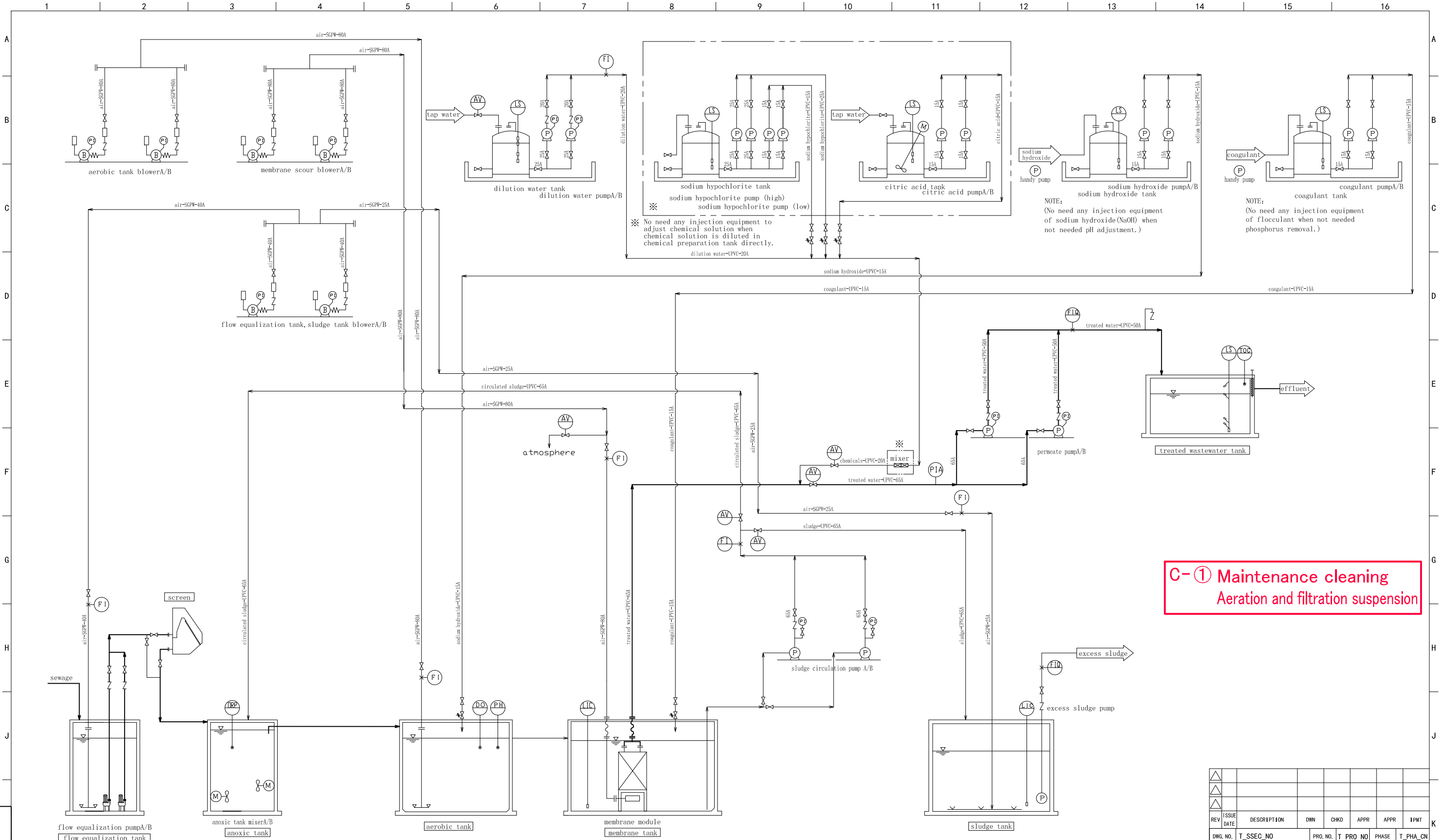
**B-③ Diffuser cleaning
Diffuser water flow**

TAG No	membrane module	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
name	membrane module	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
Qty.	1 set	1	1	1	1	1	1	1	1	1	1	1+1 set
spec.	500m ²	2.2mX4mX4mH(effective)	2.2mX5mX4mH(effective)	2.2mX1.7mX4mH(effective)		33.3m ³ (effective)	50L	50L	1500L	4000L	400L	0.17m ³ /minx10mHx0.75kW
liquid	activated sludge	activated sludge	activated sludge	activated sludge	activated sludge	sewage	sodium hypochlorite	citric acid	water	sodium hydroxide	coagulant	treated water
type	50M0500FF						resin	resin	resin	resin	resin	self priming pump

TAG No	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
name	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
Qty.	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1
spec.	0.2L/minx0.2MPax0.02kW	1.2L/minx0.45MPax0.1kW	0.7L/minx0.7MPax0.1kW	0.2L/minx0.2MPax0.02kW	17L/minx1MPax0.02kW	0.03m ³ /minx113mHx0.4kW	0.28m ³ /minx7mHx1.5kW	0.14m ³ /min	3.2m ³ /minx50kPax5.5kW	3.1m ³ /minx50kPax5.5kW	0.8m ³ /minx10mHx0.75kW	5.6m ³ /min 175N	0.14m ³ /min spacing0.5mm
liquid	sodium hypochlorite	sodium hypochlorite	citric acid	sodium hydroxide	coagulant	water	circulated sludge	sewage	air	air	air	activated sludge	sewage
type	metering pump	metering pump	metering pump	metering pump	metering pump	centrifugal pump	centrifugal pump	submersible pump	roots blower	roots blower	roots blower	submersible mixer	

DISC.	SIGN.	DATE
COUNTERSIGNED		

REV	ISSUE DATE	DESCRIPTION	DWN	CHKD	APPR	APPR	IPWT
DWG. NO.	T_SSEC_NO	PRO. NO.	T_PRO_NO	PHASE	T_PHA_CN		
MITSUBISHI RAYON AQUA SOLUTIONS							
This document / drawing is the property of Owner (Project) or its affiliated companies and contains confidential information of Owner. Any use or copying hereof is subject to the prior approval of Owner.							
200M3 / D							
P&ID (FF)							
SCALE	NONE	DWG. NO.	T_NO	MDA16-14	REV	T_REV	



C-① Maintenance cleaning
Aeration and filtration suspension

TAG No	name	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
Qty.	1 set	1	1	1	1	1	1	1	1	1	1	1+1 set
spec.	500m ²	2.2mX4mX4mH(effective)	2.2mX5mX4mH(effective)	2.2mX1.7mX4mH(effective)	1	33.3m ³ (effective)	50L	50L	1500L	4000L	400L	0.17m ³ /minX10mHx0.75kW
liquid	activated sludge	activated sludge	activated sludge	activated sludge	activated sludge	sewage	sodium hypochlorite	citric acid	water	sodium hydroxide	coagulant	treated water
type	50M0500FF						resin	resin	resin	resin	resin	self priming pump

TAG No	name	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
Qty.	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1
spec.	0.2L/minx0.2MPax0.02kW	1.2L/minx0.45MPax0.1kW	0.7L/minx0.7MPax0.1kW	0.2L/minx0.2MPax0.02kW	17L/minx1MPax0.02kW	0.03m ³ /minx113mHx0.4kW	0.28m ³ /minx7mHx1.5kW	0.14m ³ /min	3.2m ³ /minx50kPax5.5kW	3.1m ³ /minx50kPax5.5kW	0.8m ³ /minx50kPax2.2kW	5.6m ³ /min 175N	0.14m ³ /min spacing0.5mm	
liquid	sodium hypochlorite	sodium hypochlorite	citric acid	sodium hydroxide	coagulant	water	circulated sludge	sewage	air	air	air	activated sludge	sewage	
type	metering pump	metering pump	metering pump	metering pump	metering pump	metering pump	centrifugal pump	centrifugal pump	submersible pump	roots blower	roots blower	roots blower	submersible mixer	

REV	ISSUE DATE	DESCRIPTION	DWN	CHKD	APPR	APPR	IPWT
DWG. NO.	T_SSEC_NO	PRO. NO.	T_PRO_NO	PHASE	T_PHA_CN		

MITSUBISHI RAYON AQUA SOLUTIONS

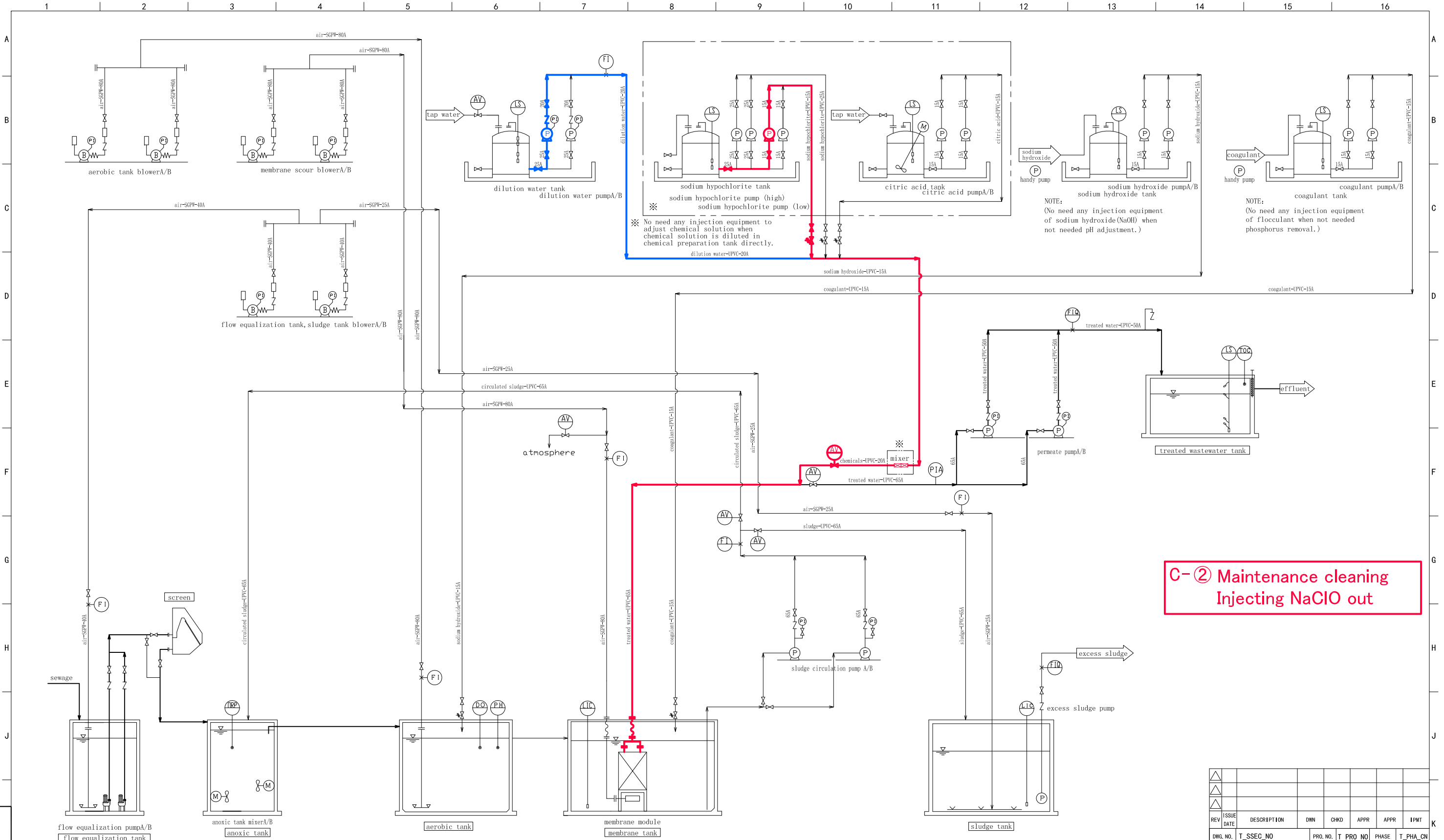
This document / drawing is the property of Owner (Project) or its affiliated companies and contains confidential information of Owner. Any use or copying hereof is subject to the prior approval of Owner.

200M3 / D

P&ID (FF)

SCALE: NONE DWG. NO. T_NO MDA16-14 REV T_REV

DISC.	SIGN.	DATE
COUNTERSIGNED		



**C-2 Maintenance cleaning
Injecting NaClO out**

TAG No	name	membrane module	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
Qty.	1 set	1	1	1	1	1	1	1	1	1	1	1	1+1 set
spec.	500m ²	2.2mX4mX4m(Effective)	2.2mX5mX4m(Effective)	2.2mX1.7mX4m(Effective)	1	33.3m (Effective)	50L	50L	1500L	4000L	400L	0.17m ³ /minX10mHX0.75kW	
liquid	activated sludge	activated sludge	activated sludge	activated sludge	activated sludge	sewage	sodium hypochlorite	citric acid	water	sodium hydroxide	coagulant	treated water	
type	50M0500FF						resin	resin	resin	resin	resin	self priming pump	

TAG No	name	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
Qty.	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1
spec.	0.2L/minX0.2MPax0.02kW	1.2L/minX0.45MPax0.1kW	0.7L/minX0.7MPax0.1kW	0.2L/minX0.2MPax0.02kW	17mL/minX1MPax0.02kW	0.03m ³ /minX1.3mHX0.4kW	0.28m ³ /minX7mHX1.5kW	0.14m ³ /min	3.2m ³ /minX50kPax5.5kW	3.1m ³ /minX50kPax5.5kW	0.8m ³ /minX50kPax2.2kW	5.6m ³ /min 175N	0.14m ³ /min spacing0.5mm	
liquid	sodium hypochlorite	sodium hypochlorite	citric acid	sodium hydroxide	coagulant	water	circulated sludge	sewage	air	air	air	activated sludge	sewage	
type	metering pump	metering pump	metering pump	metering pump	metering pump	centrifugal pump	centrifugal pump	submersible pump	roots blower	roots blower	roots blower	submersible mixer		

DISC.	STON.	DATE
COUNTERSIGNED		

REV	ISSUE DATE	DESCRIPTION	DWN	CHKD	APPR	APPR	IPWT
DWG. NO.	T_SSEC_NO	PRO. NO.	T_PRO_NO	PHASE	T_PHA_CN		

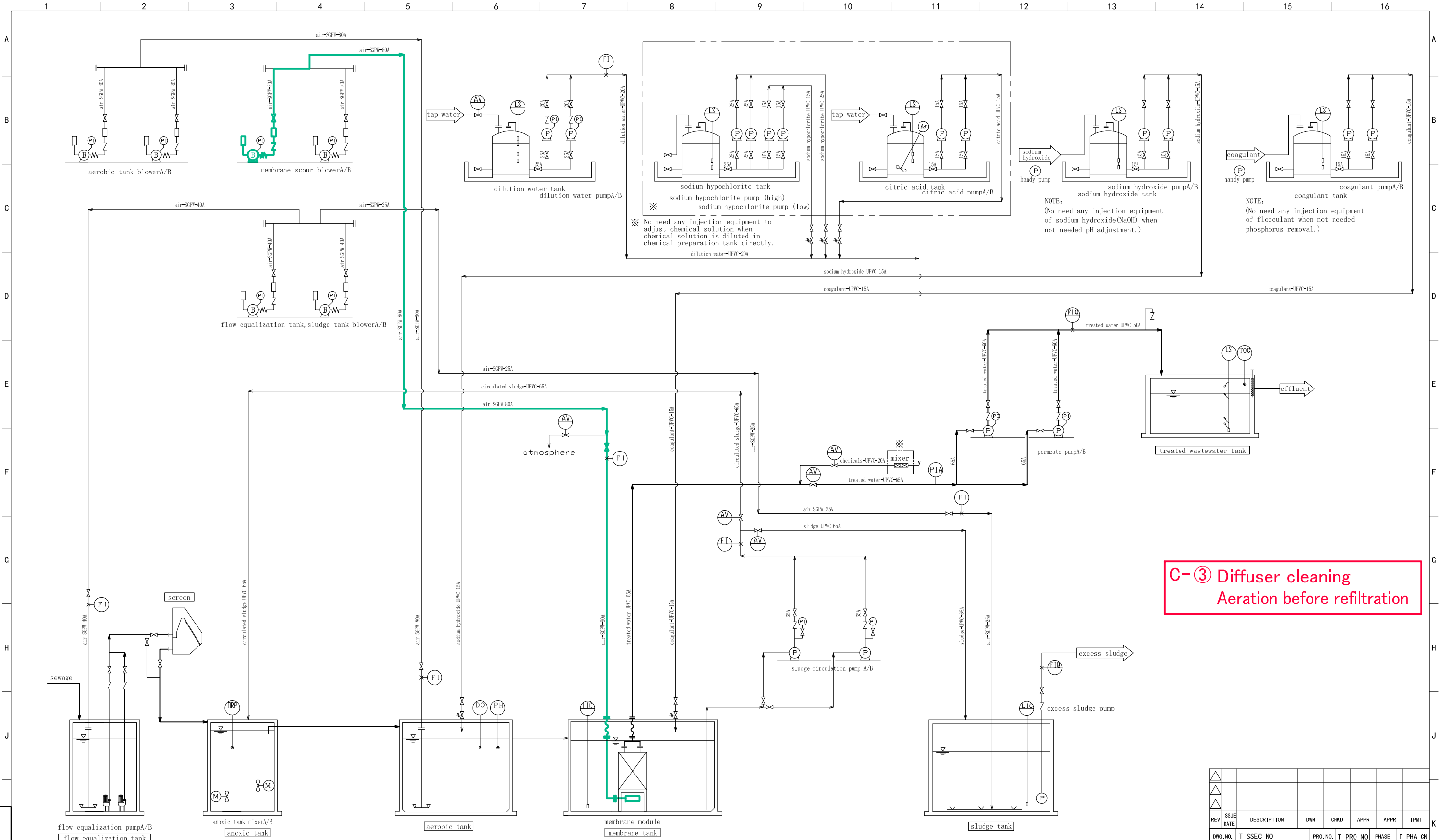
MITSUBISHI RAYON AQUA SOLUTIONS

This document / drawing is the property of Owner (Project) or its affiliated companies and contains confidential information of Owner. Any use or copying hereof is subject to the prior approval of Owner.

200M3 / D

P&ID (FF)

SCALE	DWG. NO.	REV
NONE	T_NO	T_REV



C- ③ Diffuser cleaning
Aeration before refiltration

TAG No	membrane module	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
name	membrane module	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
Qty.	1 set	1	1	1	1	1	1	1	1	1	1	1+1 set
spec.	500m ²	2.2mX4mX4mH(effective)	2.2mX5mX4mH(effective)	2.2mX1.7mX4mH(effective)		33.3m ³ (effective)	50L	50L	1500L	4000L	400L	0.17m ³ /minX10mHx0.75kW
liquid	activated sludge	activated sludge	activated sludge	activated sludge	activated sludge	sewage	sodium hypochlorite	citric acid	water	sodium hydroxide	coagulant	treated water
type	50M0500FF						resin	resin	resin	resin	resin	self priming pump

TAG No	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
name	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
Qty.	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1
spec.	0.2L/minx0.2MPax0.02kW	1.2L/minx0.45MPax0.1kW	0.7L/minx0.7MPax0.1kW	0.2L/minx0.2MPax0.02kW	17L/minx1MPax0.02kW	0.03m ³ /minx113mHx0.4kW	0.28m ³ /minx7mHx1.5kW	0.14m ³ /min	3.2m ³ /minx50kPax5.5kW	3.1m ³ /minx50kPax5.5kW	0.8m ³ /minx10mHx2.7kW	5.6m ³ /min 175N	0.14m ³ /min spacing0.5mm
liquid	sodium hypochlorite	sodium hypochlorite	citric acid	sodium hydroxide	coagulant	water	circulated sludge	sewage	air	air	air	activated sludge	sewage
type	metering pump	metering pump	metering pump	metering pump	metering pump	centrifugal pump	centrifugal pump	submersible pump	roots blower	roots blower	roots blower	submersible mixer	

DISC.	SIGN.	DATE
COUNTERSIGNED		

REV	ISSUE DATE	DESCRIPTION	DWN	CHKD	APPR	APPR	IPWT
DWG. NO.	T_SSEC_NO	PRO. NO.	T_PRO_NO	PHASE	T_PHA_CN		

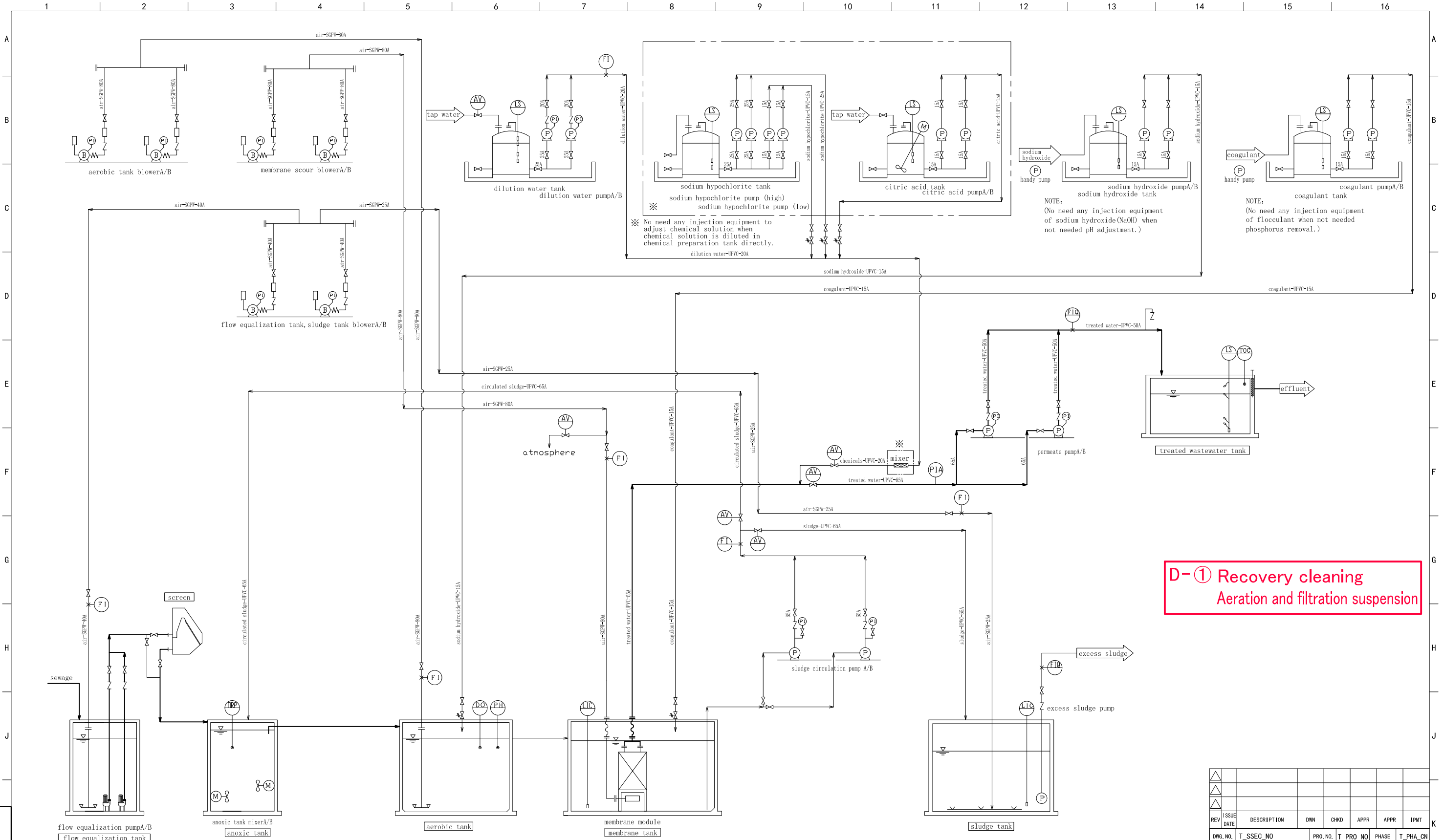
MITSUBISHI RAYON AQUA SOLUTIONS

This document / drawing is the property of Owner (Project) or its affiliated companies and contains confidential information of Owner. Any use or copying hereof is subject to the prior approval of Owner.

200M3 / D

P&ID (FF)

SCALE	DWG. NO.	REV
NONE	T_NO	T_REV



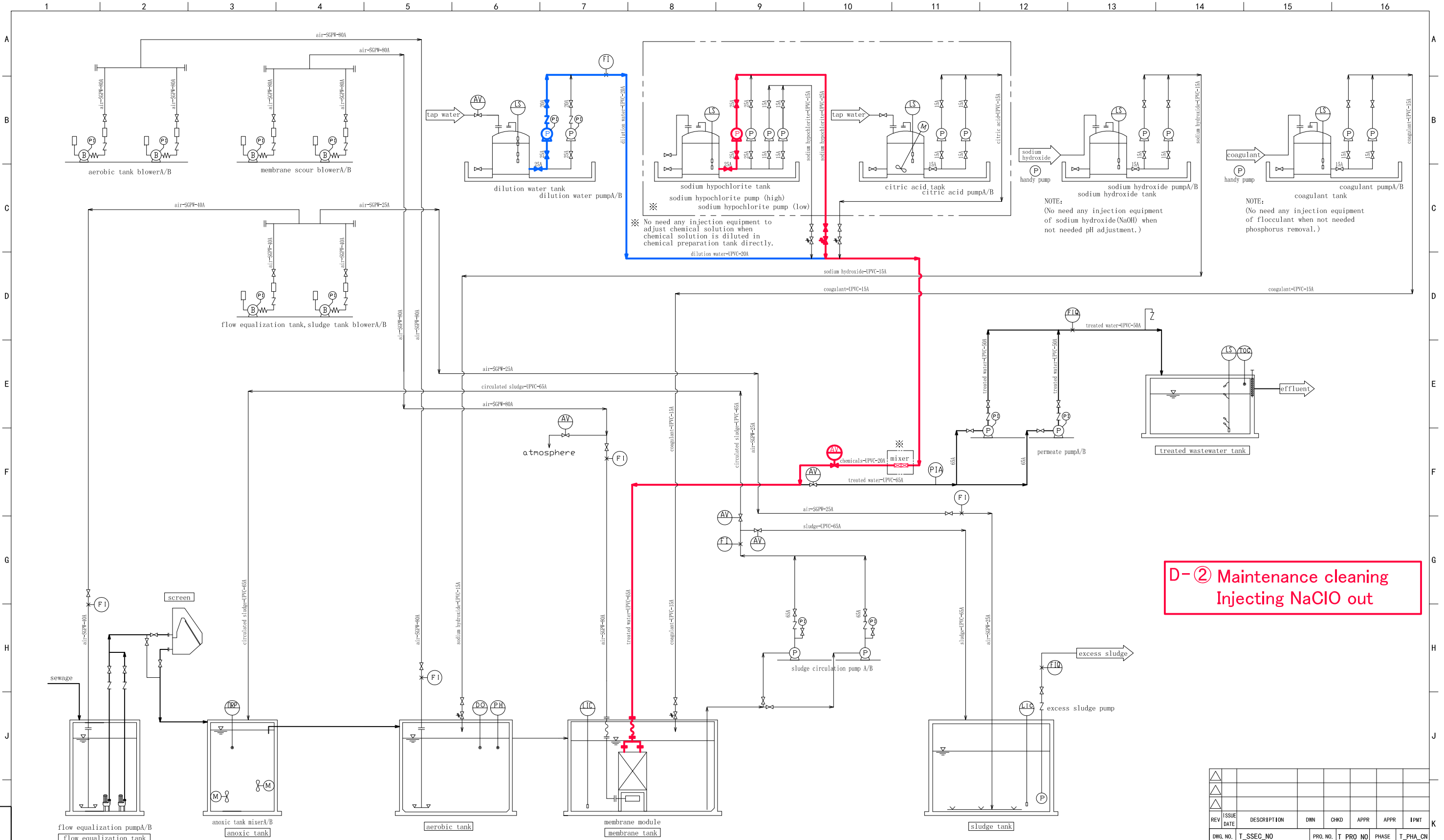
D-① Recovery cleaning
Aeration and filtration suspension

TAG No	membrane module	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
name	membrane module	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
Qty.	1 set	1	1	1	1	1	1	1	1	1	1	1+1 set
spec.	500m ²	2.2mX4mX4mH(effective)	2.2mX5mX4mH(effective)	2.2mX1.7mX4mH(effective)		33.3m (effective)	50L	50L	1500L	4000L	400L	0.17m ³ /minX10mHx0.75kW
liquid	activated sludge	activated sludge	activated sludge	activated sludge	activated sludge	sewage	sodium hypochlorite	citric acid	water	sodium hydroxide	coagulant	treated water
type	50M0500FF						resin	resin	resin	resin	resin	self priming pump

TAG No	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
name	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
Qty.	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1
spec.	0.2L/minx0.2MPax0.02kW	1.2L/minx0.45MPax0.1kW	0.7L/minx0.7MPax0.1kW	0.2L/minx0.2MPax0.02kW	17L/minx1MPax0.02kW	0.03m ³ /minx113mHx0.4kW	0.28m ³ /minx7mHx1.5kW	0.14m ³ /min	3.2m ³ /minx50kPax5.5kW	3.1m ³ /minx50kPax5.5kW	0.8m ³ /minx10mHx2.7kW	5.6m ³ /min 175N	0.14m ³ /min spacing0.5mm
liquid	sodium hypochlorite	sodium hypochlorite	citric acid	sodium hydroxide	coagulant	water	circulated sludge	sewage	air	air	air	activated sludge	sewage
type	metering pump	metering pump	metering pump	metering pump	metering pump	centrifugal pump	centrifugal pump	submersible pump	roots blower	roots blower	roots blower	submersible mixer	

REV	ISSUE DATE	DESCRIPTION	DWN	CHKD	APPR	APPR	IPWT
DWG. NO. T_SSEC_NO			PRO. NO. T_PRO_NO		PHASE	T_PHA_CN	
MITSUBISHI RAYON AQUA SOLUTIONS							
<p><i>This document / drawing is the property of Owner (Project) or its affiliated companies and contains confidential information of Owner. Any use or copying hereof is subject to the prior approval of Owner.</i></p>							
200M3 / D							
P&ID (FF)							
SCALE NONE		DWG. NO. T_NO		MDA16-14		REV T_REV	

DISC.	SIGN.	DATE
COUNTERSIGNED		



**D-② Maintenance cleaning
Injecting NaClO out**

TAG No	name	membrane module	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
Qty.	1 set	1	1	1	1	1	1	1	1	1	1	1	1+1 set
spec.	500m ²	2.2mX4mX4m(Effective)	2.2mX5mX4m(Effective)	2.2mX1.7mX4m(Effective)	1	33.3m (Effective)	50L	50L	1500L	4000L	400L	0.17m ³ /minX10mHX0.75kW	
liquid	activated sludge	activated sludge	activated sludge	activated sludge	activated sludge	sewage	sodium hypochlorite	citric acid	water	sodium hydroxide	coagulant	treated water	
type	50M0500FF						resin	resin	resin	resin	resin	self priming pump	

TAG No	name	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
Qty.	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1
spec.	0.2L/minX0.2MPax0.02kW	1.2L/minX0.45MPax0.1kW	0.7L/minX0.7MPax0.1kW	0.2L/minX0.2MPax0.02kW	17mL/minX1MPax0.02kW	0.03m ³ /minX1.3mHX0.4kW	0.28m ³ /minX7mHX1.5kW	0.14m ³ /min	3.2m ³ /minX50kPax5.5kW	3.1m ³ /minX50kPax5.5kW	0.8m ³ /minX50kPax2.2kW	5.6m ³ /min 175N	0.14m ³ /min spacing0.5mm	
liquid	sodium hypochlorite	sodium hypochlorite	citric acid	sodium hydroxide	coagulant	water	circulated sludge	sewage	air	air	air	activated sludge	sewage	
type	metering pump	metering pump	metering pump	metering pump	metering pump	centrifugal pump	centrifugal pump	submersible pump	roots blower	roots blower	roots blower	submersible mixer		

REV	ISSUE DATE	DESCRIPTION	DWN	CHKD	APPR	APPR	IPMT
DWG. NO.	T_SSEC_NO	PRO. NO.	T_PRO_NO	PHASE	T_PHA_CN		

MITSUBISHI RAYON AQUA SOLUTIONS

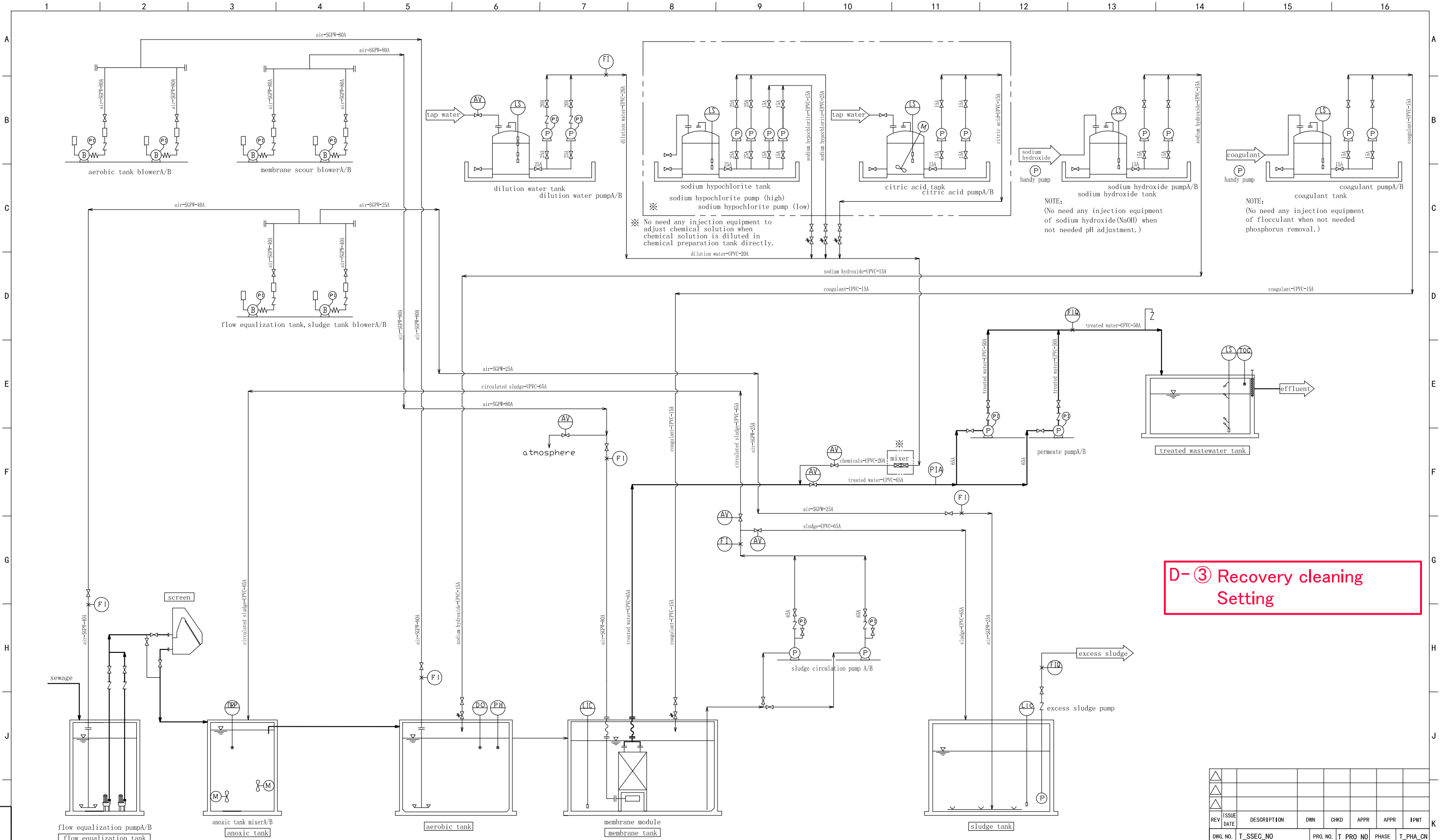
This document / drawing is the property of Owner (Project) or its affiliated companies and contains confidential information of Owner. Any use or copying hereof is subject to the prior approval of Owner.

200M3 / D

P&ID (FF)

SCALE: NONE DWG. NO. T_NO MDA16-14 REV T_REV

DISC.	SYGN.	DATE
COUNTERSIGNED		



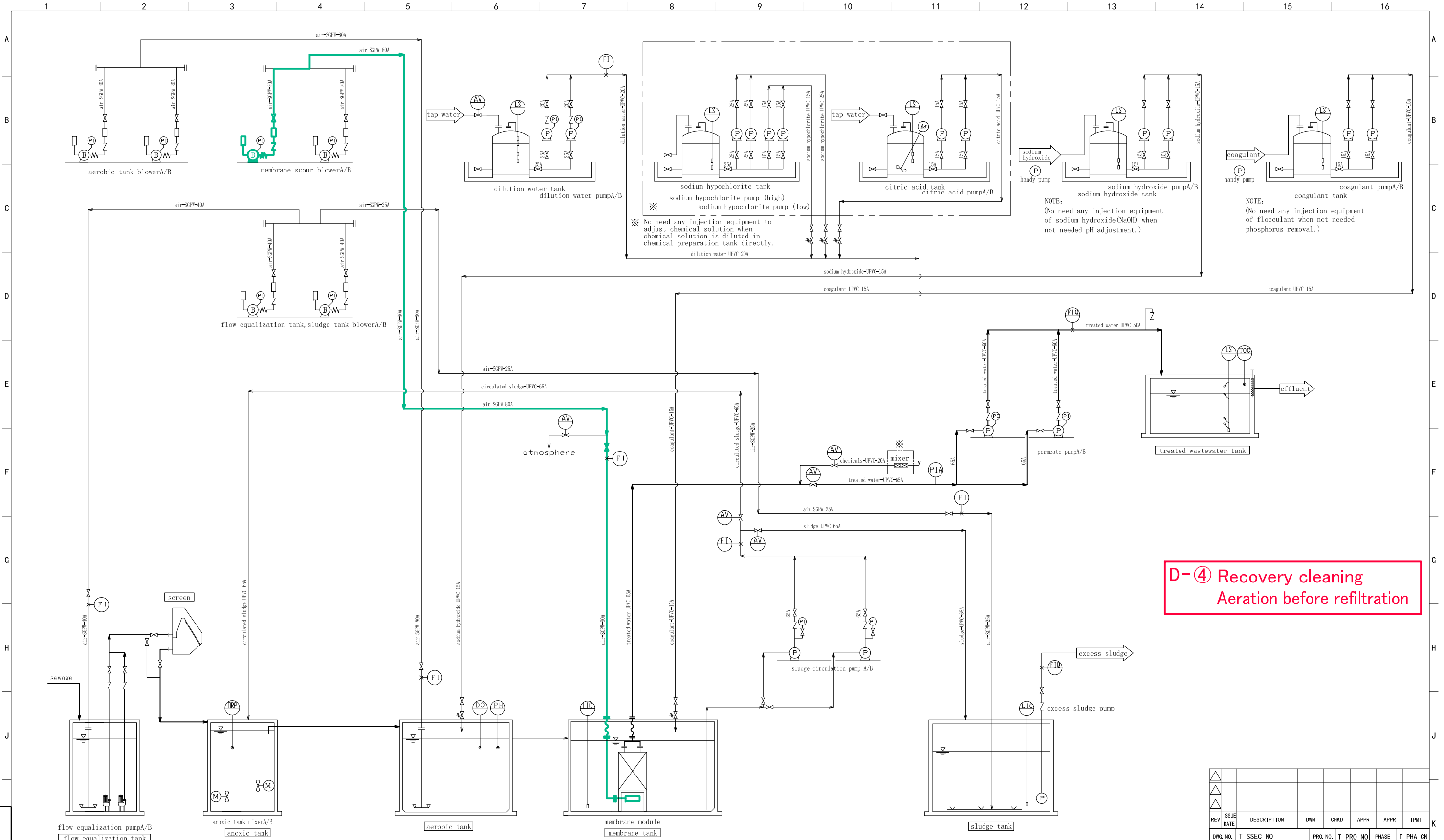
D- ③ Recovery cleaning Setting

TAG No	membrane module	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
name	membrane module	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
Qty.	1 set	1	1	1	1	1	1	1	1	1	1	1+1 set
spec.	500m ²	2.2mX4mX4mH(effective)	2.2mX5mX4mH(effective)	2.2mX1.7mX4mH(effective)		33.3m ³ (effective)	50L	50L	1500L	4000L	400L	0.17m ³ /minX10mHx0.75kW
liquid	activated sludge	activated sludge	activated sludge	activated sludge	activated sludge	sewage	sodium hypochlorite	citric acid	water	sodium hydroxide	coagulant	treated water
type	50M0500FF						resin	resin	resin	resin	resin	self priming pump

TAG No	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
name	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
Qty.	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1
spec.	0.2L/minx0.2MPax0.02kW	1.2L/minx0.45MPax0.1kW	0.7L/minx0.7MPax0.1kW	0.2L/minx0.2MPax0.02kW	17L/minx1MPax0.02kW	0.03m ³ /minx113mHx0.4kW	0.28m ³ /minx7mHx1.5kW	0.14m ³ /min	3.2m ³ /minx50kPax5.5kW	3.1m ³ /minx50kPax5.5kW	0.8m ³ /minx50kPax2.2kW	5.6m ³ /min 175N	0.14m ³ /min spacing0.5mm
liquid	sodium hypochlorite	sodium hypochlorite	citric acid	sodium hydroxide	coagulant	water	circulated sludge	sewage	air	air	air	activated sludge	sewage
type	metering pump	metering pump	metering pump	metering pump	metering pump	centrifugal pump	centrifugal pump	submersible pump	roots blower	roots blower	roots blower	submersible mixer	

DISC.	STCN.	DATE
COUNTERSIGNED		

REV	ISSUE DATE	DESCRIPTION	DWN	CHKD	APPR	APPR	IPMT
DWG. NO.	T_SSEC_NO	PRO. NO.	T_PRO_NO	PHASE	T_PHA_CN		
MITSUBISHI RAYON AQUA SOLUTIONS							
<p><i>This document / drawing is the property of Owner (Project) or its affiliated companies and contains confidential information of Owner. Any use or copying hereof is subject to the prior approval of Owner.</i></p>							
200M3 / D							
P&ID (FF)							
SCALE	NONE	DWG. NO.	T_NO	MDA16-14	REV	T_REV	



**D-④ Recovery cleaning
Aeration before refiltration**

TAG No	name	membrane module	anoxic tank	aerobic tank	membrane tank	sludge tank	flow equalization tank	sodium hypochlorite tank	citric acid tank	dilution water tank	sodium hydroxide tank	coagulant tank	permeate pump
Qty.	1 set	1	1	1	1	1	1	1	1	1	1	1	1+1 set
spec.	500m ²	2.2mX4mX4mH(effective)	2.2mX5mX4mH(effective)	2.2mX1.7mX4mH(effective)	1	33.3m ³ (effective)	50L	50L	1500L	4000L	400L	0.17m ³ /minX10mHx0.75kW	
liquid	activated sludge	activated sludge	activated sludge	activated sludge	activated sludge	sewage	sodium hypochlorite	citric acid	water	sodium hydroxide	coagulant	treated water	
type	50M0500FF						resin	resin	resin	resin	resin	self priming pump	

TAG No	name	sodium hypochlorite pump (low)	sodium hypochlorite pump (high)	citric acid pump	sodium hydroxide pump	coagulant pump	dilution water pump	sludge circulation pump	flow equalization pump	aerobic tank blower	membrane scour blower	flow equalization tank, sludge tank blower	anoxic tank mixer	screen
Qty.	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1+1 set	1
spec.	0.2L/minx0.2MPax0.02kW	1.2L/minx0.45MPax0.1kW	0.7L/minx0.7MPax0.1kW	0.2L/minx0.2MPax0.02kW	17mL/minx1MPax0.02kW	0.03m ³ /minx113mHx0.4kW	0.28m ³ /minx7mHx1.5kW	0.14m ³ /min	3.2m ³ /minx50kPax5.5kW	3.1m ³ /minx50kPax5.5kW	0.8m ³ /minx50kPax2.2kW	5.6m ³ /min 175N	0.14m ² /min spacing0.5mm	
liquid	sodium hypochlorite	sodium hypochlorite	citric acid	sodium hydroxide	coagulant	water	circulated sludge	sewage	air	air	air	activated sludge	sewage	
type	metering pump	metering pump	metering pump	metering pump	metering pump	centrifugal pump	centrifugal pump	submersible pump	roots blower	roots blower	roots blower	submersible mixer		

DISC.	SYGN.	DATE
COUNTERSIGNED		

REV	ISSUE DATE	DESCRIPTION	DWN	CHKD	APPR	APPR	IPMT
DWG. NO. T_SSEC_NO			PRO. NO. T_PRO_NO		PHASE		T_PHA_CN
MITSUBISHI RAYON AQUA SOLUTIONS							
<p><i>This document / drawing is the property of Owner (Project) or its affiliated companies and contains confidential information of Owner. Any use or copying hereof is subject to the prior approval of Owner.</i></p>							
200M3 / D							
P&ID (FF)							
SCALE NONE		DWG. NO. T_NO		MDA16-14		REV T_REV	