宜蘭縣政府

宜蘭縣利澤垃圾資源回收(焚化)廠修建營運移轉(ROT)案

招商文件(修正稿)

第貳冊

建廠工程主要圖說

宜蘭縣政府環境保護局

中華民國 114 年 8 月

宜蘭縣利澤垃圾資源回收(焚化)廠修建營運移轉(ROT)案招商文件(修正稿)第貳冊

宜蘭縣政府環境保護局

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招商文件(修正稿)
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第二部　投資契約

第三部　操作營運條款

第貳冊　建廠工程主要圖說

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第貳冊

建廠工程主要圖說

宜蘭縣利澤垃圾資源回收(焚化)廠修建營運移轉(ROT)案
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Part A　利澤焚化廠建廠工程主要圖說

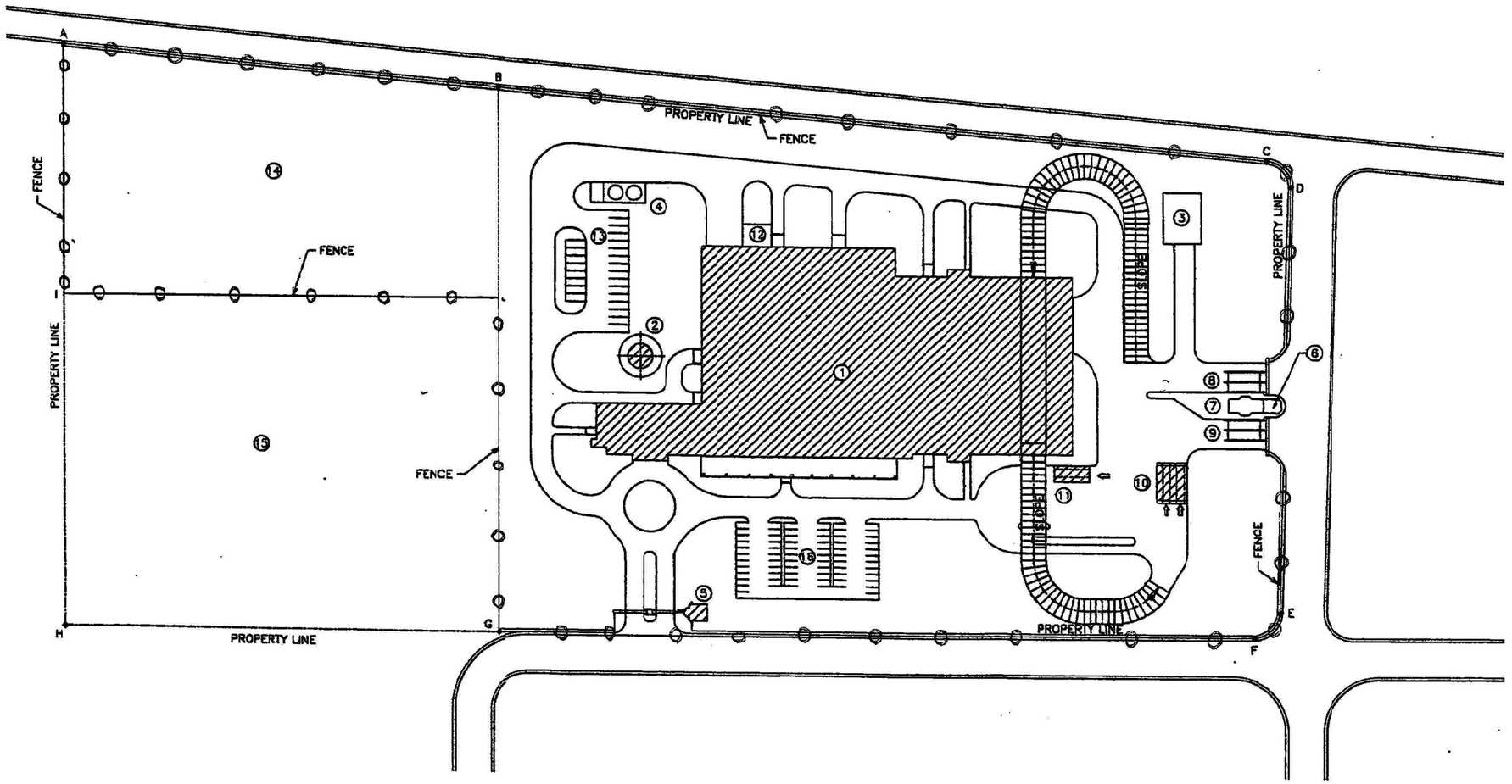
NO.	DATE	DESCRIPTION	BY	CHKD	APPD
1	28.Mar.2002	Drive Way has been changed as oncoming traffic.			

PLANT NORTH 18.72927°

委託操作用地範圍線

FOR APPROVAL

本圖說內容(含設備、尺寸、施工準則、材料、型號等)，得由得標廠商依據本文件第壹部份投標須知及契約書第貳部份(含)前規定核對無誤，各圖有關之細部設計經簽合，以符合工作需要及合約規定。



①	PLANT BUILDING
②	STACK
③	CITY WATER RESERVOIR AND POTABLE WATER RESERVOIR
④	DIESEL OIL STORAGE TANK
⑤	GUARD ROOM
⑥	GUARD ROOM
⑦	WEIGHING BRIDGE ROOM
⑧	REFUSE WEIGHING BRIDGE
⑨	ASH WEIGHING BRIDGE
⑩	AUTOMATIC CAR WASHING AREA
⑪	HAND CAR WASHING AREA
⑫	MAIN TRANSFORMER AREA
⑬	PARKING
⑭	RECREATION AREA
⑮	REFUSE DISPOSED AREA
⑯	PARKING

LOCATION	ORDINATE(N)	ABSCISSA(E)
A	2728958.790	333812.245
B	2728791.606	333846.608
C	2728494.208	333908.040
D	2728482.462	333900.893
E	2728438.278	333738.835
F	2728445.048	333726.628
G	2728729.817	333641.035
H	2728892.622	333592.101
I	2728930.490	333718.030
J	2728788.248	333782.396

PLOT PLAN

for 3rd Projection

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	TITLE: SITE PLOT PLAN
APPROVED Y.Ozawa	
CHECKED	
DESIGNED S.Ozawa Nunome	CLIENT DWG NO. 4817C-17-02-006
DRAWN	
SCALE 1/1000	MHI DWG NO. KZB-01-M1002
MHI PROJECT NO. 32221	

MITSUBISHI HEAVY INDUSTRIES,LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

REV. NO. a1

DRAWN ISSUED

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
4	28.Jun'02	Totally Revised.	M.S	O.N S.K	K.T
3	15.Jul'02	Totally Revised.	M.S	O.N S.K	K.T
2	09.Sep'02	Revised.	M.S	O.N	S.K K.T
1	02.Oct'02	Revised.	M.S	O.N	S.K K.T
0	17.Oct'02	Issued as approved drawing and design progress	M.S	O.N	S.K K.T

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY ... DATE 91.10.21

FOR CONSTRUCTION
This drawing was approved by the engineer on 91/10/21 per Letter 41-予-MH-203

1FL-4500 PLAN

1FL-5000 PLAN

1FL-14500 ~ -10500 PLAN

1FL-14500 PLAN

1FL-5000 PLAN

B1-01 ASH BUNKER DRAINAGE PIT		B1-04 PUMP ROOM (2)		B1-06 DIRTY DRAINAGE PIT		B1-10 EQUALIZATION TANK B	
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		②	FILTRATE REFUSE DRAINAGE INJECTION PUMP #1,#4				
				B1-07 NEUTRALIZATION TANK		B1-11 ASH BUNKER DRAINAGE SEDIMENTATION PIT	
B1-02 REFUSE BUNKER DRAINAGE PIT (2)		B1-05 PUMP ROOM (1)					
①	REFUSE BUNKER DRAINAGE PUMP #3,#4	①	FILTRATE REFUSE DRAINAGE TANK #1				
		②	FILTRATE REFUSE DRAINAGE INJECTION PUMP #1,#2	B1-08 REUSE WATER STORAGE TANK			
		③	CONDENSATE RETURN PUMP				
B1-03 REFUSE BUNKER DRAINAGE PIT (1)		④	AIR PREHEATER DRAIN PUMP				
①	REFUSE BUNKER DRAINAGE PUMP #1,#2	⑤	AIR PREHEATER DRAIN TANK	B1-09 EQUALIZATION TANK A			
				①	AERATOR OF EQUALIZATION TANK A		

[INSTRUCTIONS]

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1FL-14500 ~ 1FL±0

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	
APPROVED	K.TAKAHASHI
CHECKED	S.KAMIYAMA
DESIGNED	O.NAGANO
DRAWN	M.SAWAMOTO
SCALE	1/300
MHI PROJECT NO.	32221

TITLE: GENERAL ARRANGEMENT OF FLOOR PLAN 1FL-14.5M~1FL±0 LEVEL (B1FL)
CLIENT DWG NO. 4817C-01-01-025
MHI DWG NO. QRB-003-6415

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS

NO.	DATE	DESCRIPTION	BY	CHKD	APPRD
A	28.Jun'02	Totally Revised.	M.S	O.N	S.K / K.T
A	15.Jul'02	Totally Revised.	M.S	O.N	S.K	K.T
A	09.Sep'02	Revised.	M.S	O.N	S.K	K.T
A	02.Oct'02	Revised.	M.S	O.N	S.K	K.T
A	17.Oct'02	Issued as approved drawing and design progressed by S.ONISHI			

FOR CONSTRUCTION

This drawing was approved by the Engineer on 2002/10/18 per LETTER No. LP5-SP-HM1-202

1FL+4500 PLAN

1FL+2200 PLAN

Route of hoist rail was changed.

EXP. JOINT

EXP. JOINT

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BY ... DATE 91.10.25

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1FL± 0,1FL+3300

For 3rd Projection

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠設建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	
APPROVED	K.TAKAHASHI
CHECKED	S.KAWIYAMA
DESIGNED	O.NAGANO
DRAWN	M.SAWAMOTO
SCALE	1/300
MHI PROJECT NO.	32221

TITLE: GENERAL ARRANGEMENT OF FLOOR PLAN 1FL±0M LEVEL (1FL)

CLIENT DWG NO. 4817C-01-01-026

MHI DWG NO. QRB-003-6416

REV. NO. A

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS

DRAWN SSUED

Gi-6416.dwg

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	28.Jun'02	Totally Revised.	M.S	O.N	S.K / K.T
2	15.Jul'02	Totally Revised.	M.S	O.N	S.K / K.T
3	09.Sep'02	Revised.	M.S	O.N	S.K / K.T
4	02.Oct'02	Revised.	M.S	O.N	S.K / K.T
5	17.Oct'02	Issued as approved drawing and design progress	MS	ON	SK / KT

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BY ... DATE 91.10.25

FOR CONSTRUCTION

This drawing has approved by the Engineer on 91/10/16 per Letter LIS-SP-MH1-285

1FL+4600 PLAN

2F-01 INSTRUMENT WORKSHOP &SPARE PARTS ROOM	②	SEMI-DRY SCRUBBER CONVEYOR	⑦	AIR SUPPLY FAN (FOR FLY ASH SOLIDFICATION TREATMENT AREA)	2F-13 ASH CRANE RESISTOR ROOM	2F-19 SLUDGE DEWATER ROOM	③ DEODORIZER MIXING TANK
	③	No.1/2 BAG FILTER FLY ASH CONVEYOR 2			① ASH CRANE CTRL SWGR	① BELT FILTER	④ DEODORIZER SOLUTION SPRAY PUMP
2F-02 UPPER PART OF LIME SILO ROOM	④	ATOMIZER PURGE FAN		2F-10 UPPER PART OF BOILER AREA		② CAKE CONVEYOR	
① LIME SILO	⑤	ATOMIZER COOLING FAN	①	STOKER SEALING FAN	2F-14 BULKY REFUSE SHEAR OPERATING ROOM	③ CAKE BUNKER	2F-21 AHU ROOM (0201)
	⑥	ATOMIZER LUBE OIL PUMP	②	STOKER CONTROL LOCAL PANEL	① REMOTE CONTROL PANEL	④ POLYMER DOSING PUMP	① ELECTRONIC EQUIPMENT ROOM
2F-03 FLUE GAS PREHEATING BURNER ROOM	⑦	SEMI-DRY SCRUBBER CONTROL PANEL	③	STOKER		⑤ POLYMER STORAGE TANK	② INSTRUMENT WORKSHOP
① FLUE GAS REHEATING BURNER					2F-15 HYDRAULIC UNIT ROOM FOR REFUSE DUMPING GATE	⑥ W.W.T.P EXHAUST FAN	2F-22 AHU ROOM (0202)
② HOT AIR GENERATOR	2F-07 CENTRAL CONTROL ROOM					⑦ POLYMER FEEDER	① CENTRAL CONTROL ROOM
③ DILUTION AIR FAN			2F-11 TANK ROOM		① HYDRAULIC UNIT FOR REFUSE DUMPING GATE	⑧ 1 TON HOIST FOR SLUDGE DEWATER ROOM	② AIR EXHAUST FAN (FOR TANK ROOM)
④ SECONDARY AIR FAN FOR D.A.H.	2F-08 CEMS ROOM (2)		①	CONDENSATE TANK			2F-23 UPPER PART OF A.C. SILO ROOM
⑤ MIXING CHAMBER	① No.1/2 CEMS AT ECONOMIZER OUTLET		②	MAKE-UP WATER TANK	2F-16 BULKY REFUSE CHARGING HOPPER ROOM	2F-20 DEODORIZER SPRAY SYSTEM ROOM	① ACTIVATED CARBON SILO
⑥ 2 TON MAINTENANCE BEAM			③	MAKE-UP WATER TRANSFER PUMP	① BULKY REFUSE CHARGING HOPPER	① CONCENTRATED DEODORIZER STORAGE TANK	② 2 TON HOIST FOR A.C. SILO ROOM
			④	1 TON HOIST FOR TANK ROOM		② CONCENTRATED DEODORIZER TRANSFER PUMP	
2F-04 UPPER PART OF I.D.FAN ROOM	2F-08 FLY ASH SOLIDFICATION TREATMENT AREA				2F-17 UPPER PART OF ASH BUNKER		
① 3TON HOIST FOR I.D.FAN ROOM	① FLY ASH ELEVATION CONVEYOR #1/2		2F-12 T/G ROOM		① ASH CRANE		
	② CEMENT CONVEYOR		①	STEAM TURBINE			
2F-05 ELECTRONIC EQUIPMENT ROOM	③ SCREET CONVEYOR		②	GENERATOR	2F-18 REFUSE DISCHARGING PLATFORM		
	④ KNEADING MACHINE		③	TURBINE START UP PANEL	① REFUSE DUMPING GATE		
2F-06 SEMI-DRY SCRUBBER AREA	⑤ PELLETIZING MACHINE		④	LP FEED WATER HEATER	② BULKY REFUSE DUMPING GATE		
① SEMI-DRY SCRUBBER	⑥ FLY ASH SOLIDFICATION SYSTEM LOCAL CONTROL PANEL						

[INSTRUCTIONS]
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1FL+4600, 1FL+7000, 1FL+8400

For 3rd Projection

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠擴建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	TITLE: GENERAL ARRANGEMENT OF FLOOR PLAN 1FL+7.0M LEVEL (2FL)
APPROVED K.TAKAHASHI	
CHECKED S.KAMIYAMA	
DESIGNED O.NAGANO	CLIENT DWG NO. 4817C-01-01-027
DRAWN M.SAWAMOTO	
SCALE 1/300	
MHI PROJECT NO. 32221	MHI DWG NO. QRB-003-6417

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED R.E.V. NO. 4

Gi-6417.dwg

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	28.Jun'02	Totally Revised.	M.S	O.N	S.K K.T
2	15.Jul'02	Totally Revised.	M.S	O.N	S.K K.T
3	09.Sep'02	Revised.	M.S	O.N	S.K K.T
4	02.Oct'02	Revised.	M.S	O.N	S.K K.T
5	17.Oct'02	Issued as approved drawing.	M.S	O.N	S.K K.T

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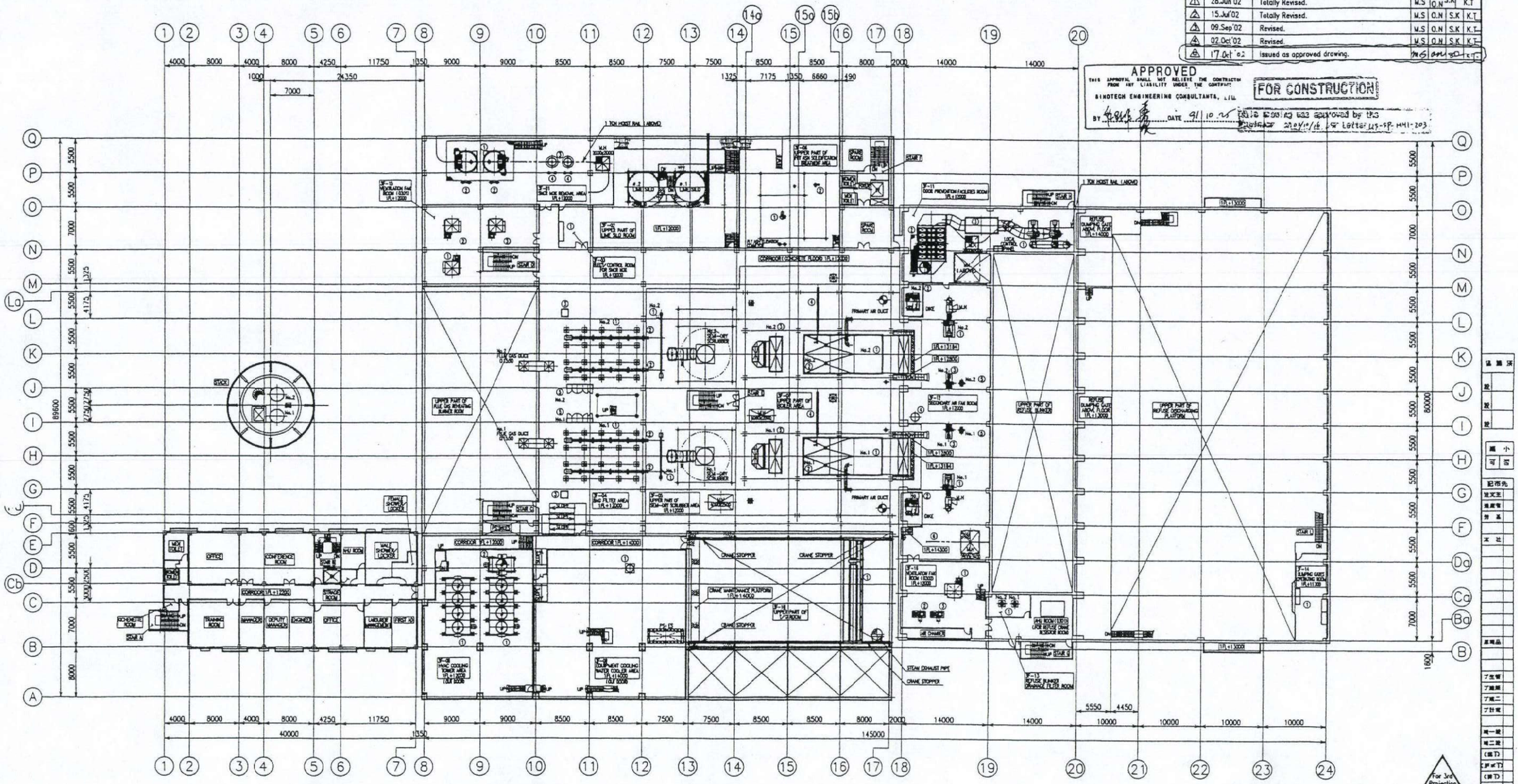
BY ... DATE 91.10.25

FOR CONSTRUCTION
This drawing was approved by EPA
2002/10/16 EPA Letter: 145-SP-MM1-203



3F-01 SNCR NOX REMOVAL AREA	3F-04 BAG FILTER AREA	3F-07 UPPER PART OF BOILER AREA	3F-11 ODOR PREVENTION FACILITIES ROOM	3F-13 REFUSE BUNKER DRAINAGE FILTER ROOM	3F-16 VENTILATION FAN ROOM (0.30')
① UREA STORAGE TANK	① BAG FILTER	① FURNACE	① FAN FOR EXCLUSIVE USE OF DEODORIZER	① REFUSE BUNKER DRAINAGE FILTER #1/2	① AIR SUPPLY FAN (FOR BOILER AREA) 2B
② UREA TRANSFER PUMP	② BAG FILTER CONVEYOR	② BOILER	② ACTIVATED CARBON ADSORPTION DEODORIZING TOWER		② AIR SUPPLY FAN (FOR BOILER AREA) 3A
③ UREA SOLUTION TANK	③ PURGE AIR FAN	③ ECONOMIZER	③ AIR FILTER		③ AIR SUPPLY FAN (FOR BOILER AREA) 3B
④ UREA SOLUTION INJECTION PUMP	④ FILTER HEATER	④ SOOT BLOWER		3F-14 DUMPING GATES OPERATING ROOM	
	⑤ No.1/2 BAG FILTER LCP	3F-08 HVAC COOLING TOWER AREA		① REFUSE DUMPING GATE / REMOTE CONTROL PANEL	
		① HVAC COOLING TOWER	3F-12 SECONDARY AIR FAN ROOM		
	3F-05 UPPER PART OF SEMI-DRY SCRUBBER AREA	② EMERGENCY HVAC COOLING TOWER	① SECONDARY AIR FAN		
3F-02 UPPER PART OF LIME SILO ROOM	① No.1/2 BAG FILTER FLY ASH CONVEYOR #1		② STOKER HYDRAULIC UNIT	3F-15 VENTILATION FAN ROOM (0.30')	
		3F-09 EQUIPMENT COOLING WATER COOLER AREA	③ BURNER FAN	① AIR SUPPLY FAN (FOR BOILER AREA) 1A	
		① EXPANSION TANK	④ BLOWDOWN FLASH TANK	② AIR SUPPLY FAN (FOR BOILER AREA) 1B	
	3F-06 UPPER PART OF FLY ASH SOLIDIFICATION TREATMENT AREA		⑤ IGNITION BURNER AIR FAN	③ AIR SUPPLY FAN (FOR BOILER AREA) 2A	
3F-03 ELECT/CONTROL ROOM FOR SNCR NOX	① FLY ASH FEEDER	3F-10 UPPER PART OF T/G ROOM	⑥ 2 TON HOIST FOR SECONDARY AIR FAN ROOM		
① SNCR NOX REMOVAL SYSTEM LCP	② CEMENT FEEDER	① TURBINE ROOM CRANE			

1FL+11.300, 1FL+12000, 1FL+12200, 1FL+14000

[INSTRUCTIONS]

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中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	
APPROVED	K.TAKAHASHI
CHECKED	S.KAMIYAMA
DESIGNED	O.NAGANO
DRAWN	M.SAWAMOTO
SCALE	1/300
MHI PROJECT NO.	32221

TITLE: GENERAL ARRANGEMENT OF FLOOR PLAN 1FL+12.0M LEVEL (3FL)
CLIENT DWG NO. 4817C-01-01-028
MHI DWG NO. QRB-003-6418

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED

REV NO. 5

4817-6418.dwg

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	28.Jun'02	Totally Revised.	M.S	O.N S.K	K.T
2	15.Jul'02	Totally Revised.	M.S	O.N	S.K K.T
3	09.Sep'02	Revised.	M.S	O.N	S.K K.T
4	02.Oct'02	Revised.	M.S	O.N	S.K K.T
5	17.Oct'02	Issued as approved drawing and design progress	M.S	O.N	S.K K.T

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BY ____ DATE 91.10.25

FOR CONSTRUCTION

4F-01 UPPER PART OF SNCR NOX REMOVAL AREA	4F-06 UPPER PART OF EQUIPMENT COOLING WATER COOLER AREA	4F-09 UPPER PART OF BOILER AREA	③ BALANCE TABLE
① 1TON HOIST FOR SNCR NOX REMOVAL AREA			④ FUME HOOD CABINET
			⑤ STORAGE CABINET
4F-02 UPPER PART OF LIME SILO ROOM			⑥ WALL CABINET
	4F-07 AIR COOLED CONDENSER AREA	4F-10 UPPER PART OF ODOR PREVENTION FACILITIES ROOM	⑦ EMERGENCY SHOWER AND EYE WASHER
	① FEEDWATER TANK WITH DEAERATOR		
4F-03 ROOF	② TURBINE BY-PASS STEAM CONVERTING VALVE	① 1TON HOIST FOR ODOR PREVENTION FACILITES ROOM	
	③ START-UP AIR EJECTOR		
	④ AIR EJECTOR		
4F-04 UPPER PART OF BAG FILTER AREA		4F-11 REFUSE CRANE RESISTOR ROOM	
		① TRAFFIC SINGL CONTROL PANEL	
4F-05 UPPER PART OF SEMI-DRY SCRUBBER AREA	4F-08 UPPER PART OF FLY ASH SOLIDFICATION TREATMENT AREA		
	① FLY ASH SILO	4F-12 LABORATORY/APPARATUS ROOM	
	② CEMENT SILO	① CENTER TABLE	
		② SIDE TABLE	

1FL+16000,1FL+18000

[INSTRUCTIONS]

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宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	
APPROVED	K.TAKAHASHI
CHECKED	S.KAMIYAMA
DESIGNED	O.NAGANO
DRAWN	M.SAWAMOTO
SCALE	1/300
MHI PROJECT NO.	32221

TITLE: GENERAL ARRANGEMENT OF FLOOR PLAN 1FL+16.0M ,18.0M LEVEL(4FL)
CLIENT DWG NO. 4817C-01-01-029
MHI DWG NO. QRB-003-6419

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED REV. NO. 5

G1-6419.dwg

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	28.Jun'02	Totally Revised.	M.S	O.N	S.K / K.T
2	15.Jul'02	Totally Revised.	M.S	O.N	S.K / K.T
3	09.Sep'02	Revised.	M.S	O.N	S.K / K.T
4	02.Oct'02	Revised.	M.S	O.N	S.K / K.T
5	17 Oct '02	Issued as approved drawing and design progress	M.S	O.N	S.K / K.T

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BY ____ DATE 91.10.25

FOR CONSTRUCTION

[R1] Welding Cad Received By Site
Date Rec'd: 91/10/18 Ref: Letter LP5-SP-TMHI-203

1FL+24700 PLAN

5F-01 UPPER PART OF LIME SILO ROOM	5F-04 UPPER PART OF FLY ASH SOLIDIFICATION TREATMENT AREA	5F-06 HOPPER PLATFORM
AIR EXHAUST FAN (FOR FLY ASH SOLIDIFICATION TREATMENT AREA)		① REFUSE CHARGING HOPPER
② AIR EXHAUST FAN (FOR LIME SILO ROOM)		② MAINTENANCE HATCH DOOR
5F-02 UPPER PART OF BAG FILTER AREA	5F-05 UPPER PART OF BOILER AREA	③ FIRE FIGHTING GUN
5F-03 UPPER PART OF SEMI-DRY SCRUBBER AREA		

[INSTRUCTIONS]

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1FL+21000, 1FL+21500, 1FL+23500

For 3rd Projection

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	TITLE: GENERAL ARRANGEMENT OF FLOOR PLAN 1FL+21.0M LEVEL (5FL)
APPROVED K.TAKAHASHI	CLIENT DWG NO. 4817C-01-01-030
CHECKED S.KAMIYAMA	
DESIGNED O.NAGANO	
DRAWN M.SAWAMOTO	
SCALE 1/300	
MHI PROJECT NO. 32221	MHI DWG NO. QRB-003-6420

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED REV. NO. 5

Gi-6420.dwg

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	28.Jun'02	Totally Revised.	M.S	O.N S.K	K.T
2	15.Jul'02	Totally Revised.	M.S	O.N	S.K K.T
3	09.Sep'02	Revised.	M.S	O.N	S.K K.T
4	02.Oct'02	Revised.	M.S	O.N	S.K K.T
5	17 Oct '02	Issued as approved drawing.	M.S	O.N	S.K K.T

1FL+24000 PLAN
(M6FL)

1FL+29500 PLAN
(6FL)

1FL+31700 PLAN

FOR CONSTRUCTION

This drawing was approved by the ENGINEER on 9/19/16 per LS2016-415-SP-HHH-203

1FL+24000,1FL+28000,1FL+28500,1FL+31700

For 3rd Projection

M6F-01 UPPER PART OF LIME SLD ROOM	M6F-04 UPPER PART OF FLY ASH SOLIDFICATION TREATMENT AREA	M6F-07 REFUSE CRANE OPERATION CABIN	6F-01 UPPER PART OF REFUSE BUNKER
		① CONTROL PANEL FOR AUTOMATIC OPERATION	① REFUSE CRANE
			② 6TON HOIST FOR REFUSE BUNKER
M6F-02 UPPER PART OF BAG FILTER AREA		M6F-08 UPPER PART OF EQUIPMENT COOLING WATER COOLER AREA	6F-02 REUSE WATER TANK ROOM
1 TON HOIST FOR BAG FILTER AREA	M6F-05 UPPER PART OF BOILER AREA		
	① 5TON HOIST FOR BOILER HOUSE # 1	① EQUIPMENT COOLING WATER COOLER	① REUSE WATER ROOF TANK (170 m³)
M6F-03 UPPER PART OF SEMI-DRY SCRUBBER AREA			② CITY WATER DISTRIBUTER
① 2 TON HOIST FOR SEMI-DRY SCRUBBER AREA	M6F-06 UPPER PART OF AIR COOLED CONDENSER AREA	M6F-09 REUSE WATER PUMP FOR ROTARY ATOMIZER ROOM	6F-03 FIRE FIGHTING GUN BOOSTER PUMP ROOM
② 3 TON HOIST FOR BOILER HOUSE # 2	① AIR COOLED CONDENSER	① FIRE FIGHTING GUN BOOSTER PUMP	
	② LP. STEAM SILENCER	① REUSE WATER SUPPLY PUMP FOR ROTARY ATOMIZER	② REUSE WATER DISTRIBUTOR
	③ EXHAUST STEAM RELIEVING SILENCER		③ 1TON MAINTENANCE BEAM

[INSTRUCTIONS]

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BY ____ DATE 91.10.25

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠設建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	
APPROVED	K.TAKAHASHI
CHECKED	S.KAMIYAMA
DESIGNED	O.NAGANO
DRAWN	M.SAWAMOTO
SCALE	1/300
MHI PROJECT NO.	32221

TITLE: GENERAL ARRANGEMENT OF FLOOR PLAN 1FL+24.0M(M6F),29.5M(6FL)

CLIENT DWG NO. 4817C-01-01-031

MH DWG NO. QRB-003-6421

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS

DRAWN ISSUED

NO. 5

Gi-6421.dwg

8

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
4	28.Jun'02	Totally Revised.	M.S	O.N S.K	K.T
3	15.Jul'02	Totally Revised.	M.S	O.N	S.K K.T
2	09.Sep'02	Revised.	M.S	O.N	S.K K.T
1	17 Oct '02	Issued as approved drawing and design proprietary	M.S	O.N	S.K K.T

1FL+39500 PLAN

1FL+45500 PLAN

1FL+39500 PLAN

Roof monitor shape was changed

1FL+39500 PLAN

1FL+43000 PLAN

1FL+39500 PLAN

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SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE

FOR CONSTRUCTION

This drawing was approved by the Engineer on 03/10/16 per Letter LES-SF-WHI-203

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE

RF-01 CITY WATER TANK ROOM	RF-03 ROOF(2)
① CITY WATER ROOF TANK(55 m³x 2 =110 m³)	① EXPANSION TANK
② POTABLE WATER ROOF TANK(4m³)	
RF-02 ROOF(1)	
① SILENCER FOR BOILER DRUM	
② SILENCER FOR SUPER HEATER	

[INSTRUCTIONS]

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● 行政院環境保護署
宜蘭縣利澤垃圾資源回收(焚化)廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	TITLE: GENERAL ARRANGEMENT OF FLOOR PLAN 1FL+32.0M~39.5M LEVEL (RFL)
APPROVED K.TAKAHASHI	
CHECKED S.KAMIYAMA	
DESIGNED O.NAGANO	CLIENT DWG NO. 4817C-01-01-032
DRAWN M.SAWAMOTO	
SCALE 1/300	MHI DWG NO. QRB-003-6422
MHI PROJECT NO. 32221	

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA SHIPYARD & MACHINERY WORKS
DRAWN ISSUED

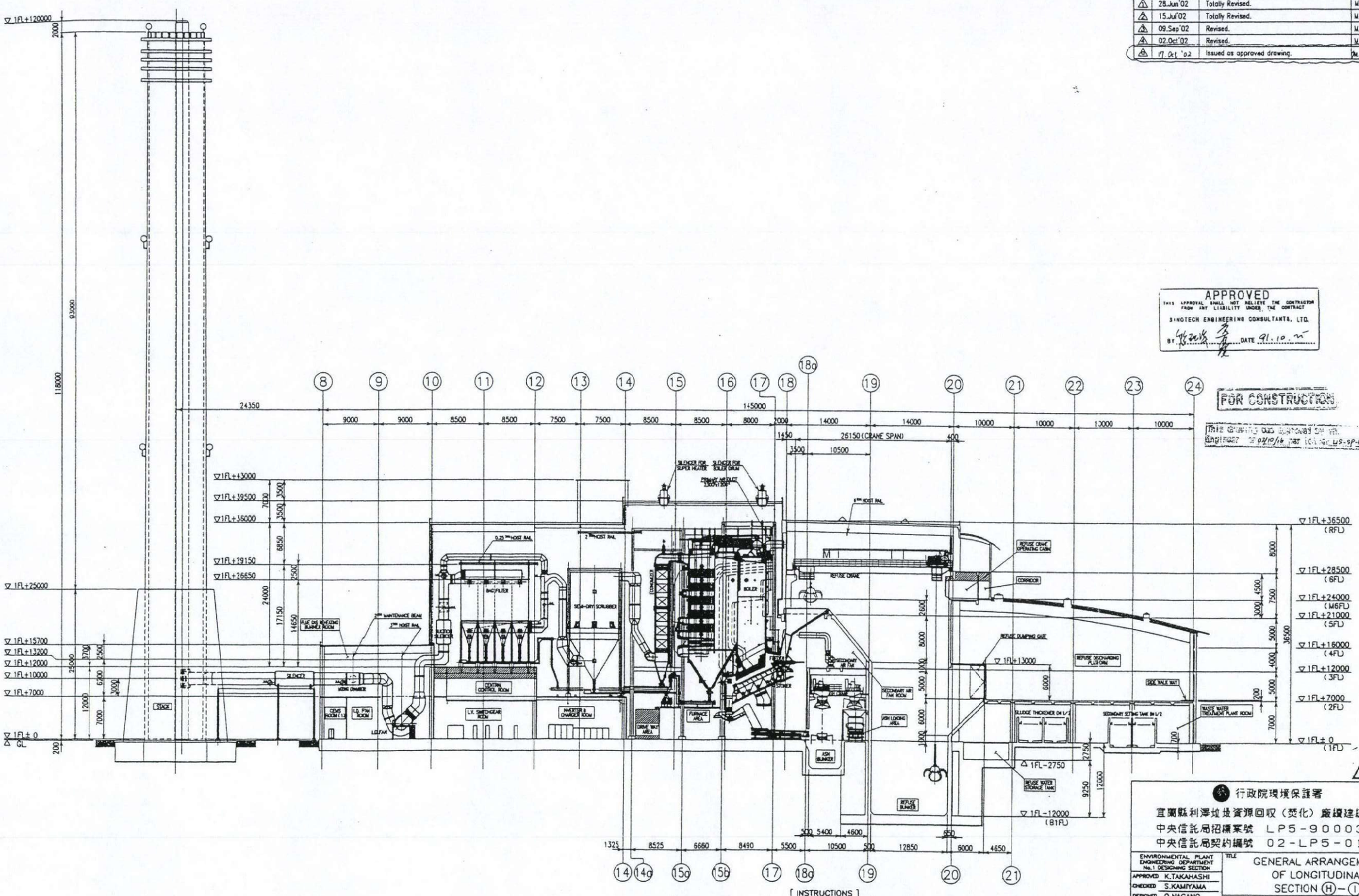
REV. NO. 4

Gi-6422.dwg

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	28.Jun'02	Totally Revised.	M.S	O.N	S.K K.T
2	15.Jul'02	Totally Revised.	M.S	O.N	S.K K.T
3	09.Sep'02	Revised.	M.S	O.N	S.K K.T
4	02.Oct'02	Revised.	M.S	O.N	S.K K.T
5	17.Oct.'02	Issued as approved drawing.	M.S	O.N	S.K K.T

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE 91.10.17

FOR CONSTRUCTION
THIS DRAWING WAS SUBMITTED BY THE ENGINEER ON 02/10/16 AND IS NO. LS-SP-HH1-203



SECTION Ⓗ~Ⓘ

[INSTRUCTIONS]

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This drawing/document, being the property of Mitsubishi Heavy Industries, Ltd. and/or the originating provider, may neither be copied, reproduced, read by any other third party nor used for any purpose other than designated without previous written consent of Mitsubishi Heavy Industries, Ltd., regardless of the status of patent, whether prior to filing, pending or registered.

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

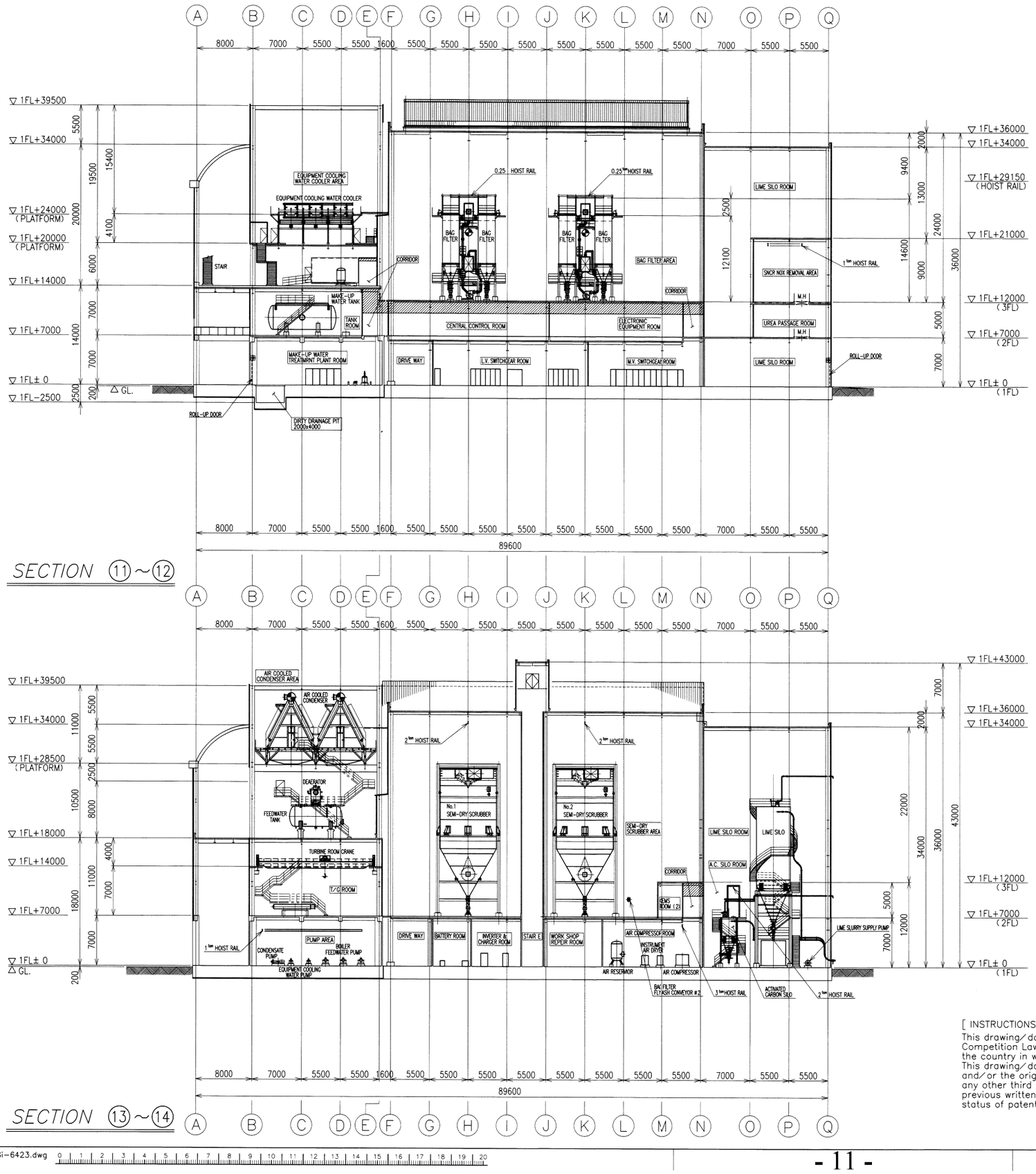
ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	
APPROVED	K.TAKAHASHI
CHECKED	S.KAMIYAMA
DESIGNED	O.NAGANO
DRAWN	M.SAWAMOTO
SCALE	1/300
MHI PROJECT NO.	32221
TITLE	GENERAL ARRANGEMENT OF LONGITUDINAL SECTION Ⓗ-Ⓘ
CLIENT DWG NO.	4817C-01-01-024
MHI DWG NO.	QRB-003-6414

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED REV. NO. 5

For 3rd Projection

GI-6414.dwg

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	28.Jun'02	Totally Revised.	M.S	O.N S.K	K.T
2	15.Jul'02	Totally Revised.	M.S	O.N	S.K	K.T
3	09.Sep'02	Revised.	M.S	O.N	S.K	K.T
5	17.Oct'02	Issued as approved drawing and design progress.	M.S	O.N	S.K	K.T
6	01.Dec'03	Totally Revised.	M.S	O.N	O.N	A.T
6	19.Feb.'04	Issued as approved drawing.	M.S	O.N	O.N	A.T
6	15.Oct.'04	For Review.	M.S	O.N	O.N	A.T
7	07.Apr.'05	As Built.	A.K	on	AT



SECTION ⑪～⑫

SECTION ⑬～⑭

[INSTRUCTIONS]

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竣工圖

中興工程顧問股份有限公司	統包商:日商三菱重工業
審核	批准 認可
日期 中華民國94年4月30日	中華民國94年4月14日

For 3rd Projection

行政院環境保護署

宜蘭縣利澤垃圾資源回收(焚化)廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	TITLE: GENERAL ARRANGEMENT OF LONGITUDINAL SECTION ⑪-⑫ AND ⑬-⑭
APPROVED K.TAKAHASHI	
CHECKED S.KAMIYAMA	
DESIGNED O.NAGANO	CLIENT DWG NO. 4817C-01-01-033
DRAWN M.SAWAMOTO	
SCALE 1/300	
MHI PROJECT NO. 32221	MHI DWG NO. QRB-003-6423

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS

REV. NO. 7

DRAWN ISSUED

協議済
設
設
設

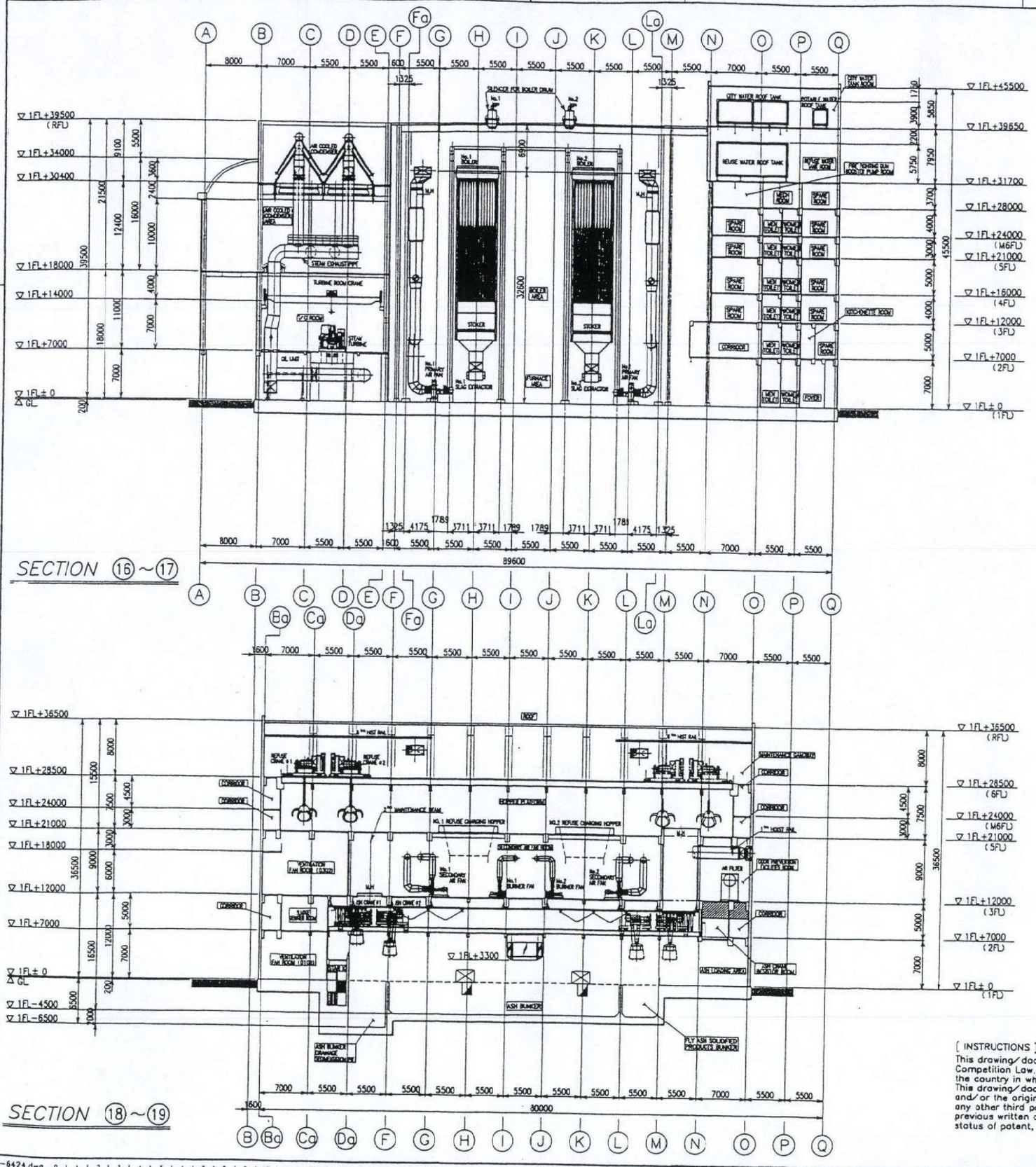
縮小 可 否

配布先
注文主
通産省
労基
本社
原燃品
プ生管
プ建築
プ建二
プ計電
環一設
環二設
(鐵T)
(炉ボT)
(排T)
環設設
(配T)
(装T)
(鐵T)
環三設
環四設
鐵設
環計設
MJK
委環一
委環二
委装配
委知(金沢)
現地
発注先
控
合計

Gi-6423.dwg

B-1-24

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	28.Jun'02	Totally Revised.	M.S	O.N	S.K / K.T
2	15.Jul'02	Totally Revised.	M.S	O.N	S.K	K.T
3	09.Sep'02	Revised.	M.S	O.N	S.K	K.T
4	17 Oct '02.	Issued as approved drawing.			



APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY ... DATE ...

FOR CONSTRUCTION

This drawing was approved by the Environment Protection Administration, Executive Yuan, R.O.C. on 92/10/16 per letter No. 09230075400

[INSTRUCTIONS]
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For 3rd Projection

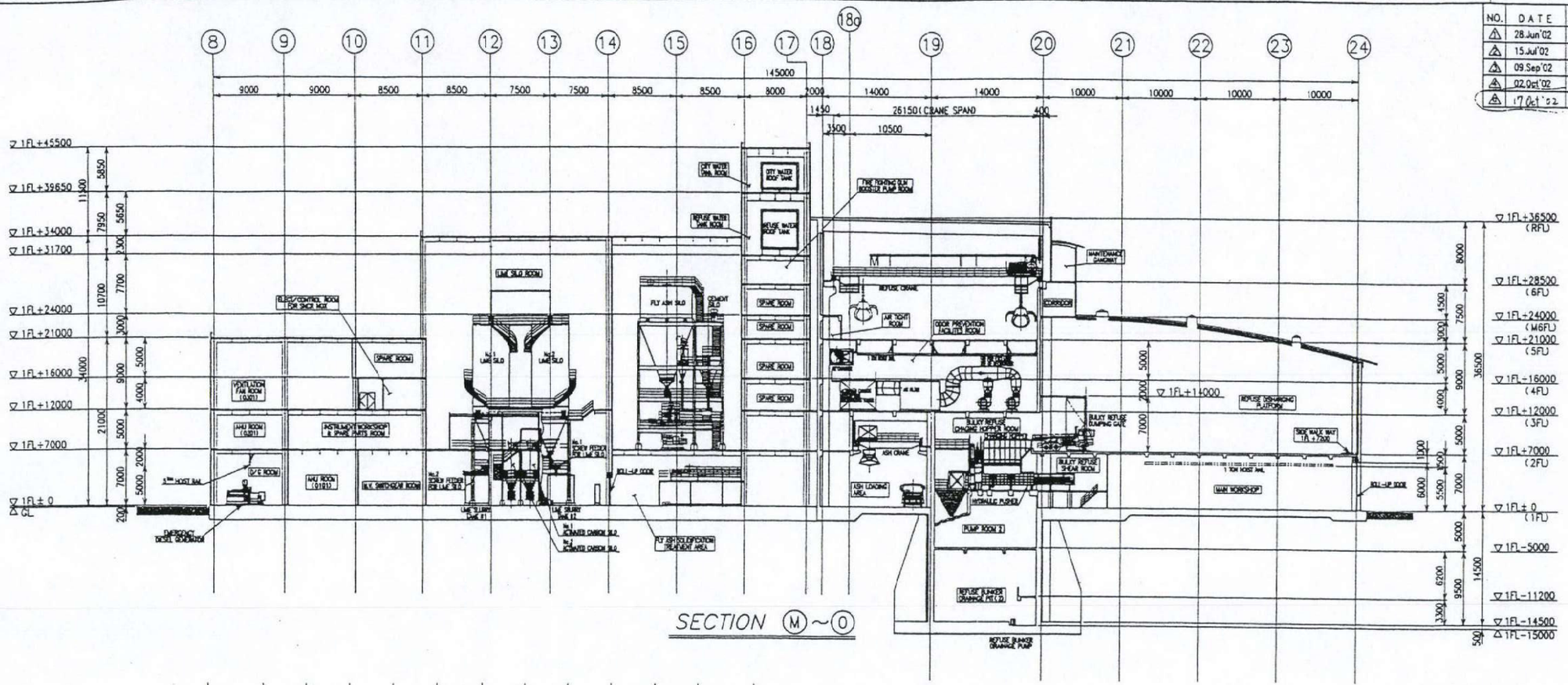
行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	TITLE: GENERAL ARRANGEMENT OF LONGITUDINAL SECTION ⑯-⑰ AND ⑱-⑲
APPROVED K.TAKAHASHI	CLIENT DWG NO. 4817C-01-01-034
CHECKED S.KAMIYAMA	
DESIGNED O.NAGANO	
DRAWN M.SAWAMOTO	
SCALE 1/300	MHI DWG NO. QRB-003-6424
MHI PROJECT NO. 32221	

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED REV. NO. 4

GI-6424.dwg

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
A	28.Jun'02	Totally Revised.	M.S	O.N	S.K / K.T
A	15.Jul'02	Totally Revised.	M.S	O.N	S.K	K.T
A	09.Sep'02	Revised.	M.S	O.N	S.K	K.T
A	02.Oct'02	Revised.	M.S	O.N	S.K	K.T
A	17.Oct'02	Issued as approved drawing.	M.S	O.N	S.K	K.T



APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM HIS LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE 91.10.25

FOR CONSTRUCTION

This drawing has approved by the Engineer on 91/10/25 per Letter 48-SP-HHI-203

For 3rd Projection

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	
APPROVED	K.TAKAHASHI
CHECKED	S.KAMIYAMA
DESIGNED	O.NAGANO
DRAWN	M.SAWAMOTO
SCALE	1/300
MHI PROJECT NO.	32221
TITLE	GENERAL ARRANGEMENT OF LONGITUDINAL SECTION Ⓜ-Ⓞ AND ⑲-⑳
CLIENT DWG NO.	4817C-01-01-037
MHI DWG NO.	QRB-003-6433

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED REV. NO. A

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QRB-003-6433.dwg

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	21 Nov. 2002	1. Added Room No. and Dimensions. 2. Revised at Marked Parts	M.I	S.O	Y.O
2	03 Mar. 2003	Revised at Marked Parts			
b	14 April 04	Issued for Construction			

1FL-4.5m PLAN

1FL-3.000 1FL-2.500

1FL-5000 PLAN

1FL-14.5m~-10.5m PLAN

1FL-5000 PLAN

STAIR DIMENSION	
Min.width	1200mm
Min.run	240mm
Max.rise	200mm

APPROVED
THIS APPROVAL DOES NOT RELIEVE THE CONTRACTOR FROM HIS CONTRACTUAL OBLIGATIONS
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE 92/1/15

FOR CONSTRUCTION

This drawing was approved by the Engineer on 92/1/15 per Letter LPS-JD-MMY-B4C

For 3rd Projection

行政院環境保護署
宜蘭縣利澤垃圾資源回收(焚化)廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	TITLE: PLANT BUILDING B1 FLOOR PLAN
APPROVED T.Okazaki	
CHECKED Kusano	
DESIGNED H.Sugita	CLIENT DWG NO. 4817C-17-02-019
DRAWN	
SCALE 1/300	MHI DWG NO. KZB-01-M1170
MHI PROJECT NO. 32221	

MITSUBISHI HEAVY INDUSTRIES,LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS

DRAWN ISSUED

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	25 Nov. 2002	1. Added Room No. and Dimensions. 2. Added Ventilation Air Chamber. 3. Revised at Marked Parts	M.I	S.O	Y.O
b	13 Mar. 2003	Revised at Marked Parts	[illegible]		[illegible]
c	18 Apr. 2003	Issued for construction		[illegible]	[illegible]

SHIMIZU ENGINEERING CONSULTANTS, LTD.
DATE 93/4/15

1FL±0.0m PLAN

1FL+3900 PLAN

1FL+2200 PLAN

LEGEND

- RC. wall
- Gypsum or Master Board on Light Weight Steel Stud
- Extruded Cement Panel wall

STAIR DIMENSION	
Min.width	1200mm
Min.run	240mm
Max.rise	200mm

For 3rd Projection

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	
APPROVED	Y.Okazaki
CHECKED	Kuwano
DESIGNED	H.Sugino
DRAWN	
SCALE	1/300
MHI PROJECT NO.	32221

TITLE: PLANT BUILDING 1FL±0.000 PLAN (1st FL)

CLIENT DWG NO. 4817C-17-02-020

MHI DWG NO. KZB-01-M1171

MITSUBISHI HEAVY INDUSTRIES,LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

REV NO. c

DRAWN ISSUED

NO.	DATE	DESCRIPTION	BY	CHKD	APPD
a	25 Nov. 2002	Added Room No. and Dimensions.	M.I	S.O	Y.O
b	23 Mar. 2003	Revised of Marked Parts			
	18 Apr. 2003	Issued for construction			

FLOOR LEVEL 1FL+8400

1FL+7.0m PLAN

1FL+4.6m PLAN

STAIR DIMENSION	
Min.width	1200mm
Min.run	240mm
Max.rise	200mm

APPROVED

ENGINEER ENGINEERING CONSULTANTS, LTD.

DATE 12/4/16

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠擴建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	TITLE: PLANT BUILDING 1FL+7,000 PLAN (2nd FL)
APPROVED T.Okazaki	
CHECKED Kusano	
DESIGNED H.Sugita	CLIENT DWG NO. 4817C-17-02-021
DRAWN	
SCALE 1/300	MHI DWG NO. KZB-01-M1172
MHI PROJECT NO. 32221	

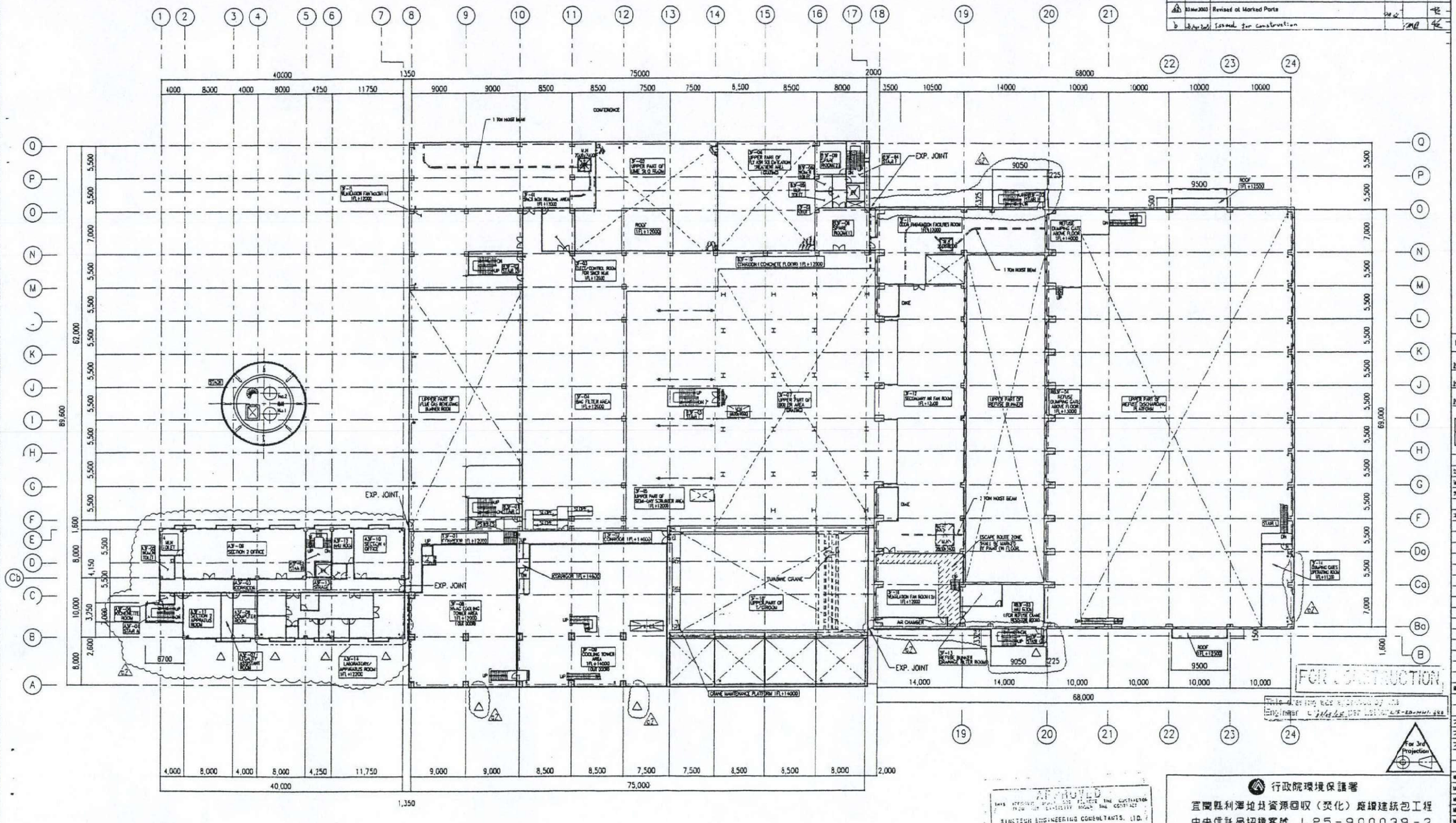
MITSUBISHI HEAVY INDUSTRIES,LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS

REV. NO. b

DRAWN ISSUED

13

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	25.Mar.2002	Added Room No. and Dimensions.	M.I	S.O	Y.O
2	03.Mar.2003	Revised at Marked Parts			
b	15.Apr.2003	Issued for construction			



1FL+12.0m PLAN

STAIR DIMENSION	
Min.width	1200mm
Min.run	240mm
Max.rise	200mm

APPROVED
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE 94/7/15

行政院環境保護署
宜蘭縣利澤地坑資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	TITLE: PLANT BUILDING 1FL+12,000 PLAN (3rd FL)
APPROVED Y.Ohzeki	
CHECKED Yusano	
DESIGNED H.Sugita	CLIENT DWG NO. 4817C-17-02-022
DRAWN	
SCALE 1/300	
M/E PROJECT NO. 32221	M/H DWG NO. KZB-01-M1173

MITSUBISHI HEAVY INDUSTRIES,LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS

DRAWN ISSUED

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	25.Mar.2002	1. Added Room No. and Dimensions. 2. Added Ventilation Air Chamber.	MJ	S.O	Y.O
2	23.May.2002	Revised at Marked Parts	[illegible]		[illegible]
b	2.Apr.2002	Issued for construction		[illegible]	[illegible]

FOR CONSTRUCTION

This drawing is [illegible] Engineer [illegible]

APPROVED
THIS DRAWING HAS BEEN CHECKED AND FOUND TO BE IN ACCORDANCE WITH THE CONTRACT
SINGTECH ENGINEERING CONSULTANTS, LTD.
BY [illegible] DATE 92/4/16

1FL+16.0m PLAN

STAIR DIMENSION	
Min.width	1200mm
Min.run	240mm
Max.rise	200mm

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	TITLE: PLANT BUILDING 1FL+16,000 PLAN (4th FL)
APPROVED Y.Okazaki	
CHECKED	
DESIGNED S.Owaki Kusano	CLIENT DWG NO. 4817C-17-02-023
DRAWN	
SCALE 1/300	
MHI PROJECT NO. 32221	MHI DWG NO. KZB-01-M1174

MITSUBISHI HEAVY INDUSTRIES,LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS

REV. NO. b
DRAWN ISSUED

15

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	25.Nov.2002	1. Added Room No. and Dimensions. 2. Revised at mark.	MJ	S.O	Y.O
2	03.Mar.2003	Revised at Marked Parts			
3	18.Apr.2003	Issued for construction			

1FL+21.0m PLAN

STAIR DIMENSION	
Min.width	1200mm
Min.run	240mm
Max.rise	200mm

SINOTECH ENGINEERING CONSULTANTS, LTD.
DATE 92/4/15

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	TITLE: PLANT BUILDING 1FL+21,000 PLAN (5th FL)
APPROVED Y.Okazaki	CLIENT DWG NO. 4817C-17-02-024
CHECKED Kawano	
DESIGNED H.Sugita	
DRAWN	
SCALE 1/300	MHI DWG NO. KZB-01-M1175
MHI PROJECT NO. 32221	

MITSUBISHI HEAVY INDUSTRIES,LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	25 Nov 2002	Added Room No. and Dimensions.	M.I	S.O	T.O
2	23 Jan 2003	Revised at Marked Parts			
b		Blueprint issued for construction			

1FL+28.6m PLAN

1FL+28.5m PLAN

1FL+24.0m PLAN

STAIR DIMENSION	
Min.width	1200mm
Min.run	240mm
Max.rise	200mm

APPROVED
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE 7/14/15

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	TITLE: PLANT BUILDING 1FL+24.0m,28.5m PLAN (6,7th FL)
APPROVED Y.Okazoe	
CHECKED	
DESIGNED S.Ooshi Kusano	CLIENT DWG NO. 4817C-17-02-025
DRAWN	
SCALE 1/300	MHI DWG NO. KZB-01-M1176
MHI PROJECT NO. 32221	

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	25 Nov. 2002	1. Added Room No. and Dimensions. 2. Revised Roof Monitor	M.I	S.O	Y.O
2	03 Dec. 2003	Revised at Marked Parts	[illegible]		[illegible]
b	04 Apr. 04	Issued for construction		[illegible]	[illegible]

1FL+31700 PLAN

1FL+45500 PLAN

1FL+39500 PLAN

1FL+39500 PLAN

1FL+24.0m PLAN

1FL+39500 PLAN

1FL+43000 PLAN

1FL+39500 PLAN

STAIR DIMENSION	
Min.width	1200mm
Min.run	240mm
Max.rise	200mm

APPROVED
DATE 03/4/14

FOR CONSTRUCTION

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	TITLE: PLANT BUILDING ROOF PLAN
APPROVED Y.Ohsumi	
CHECKED	
DESIGNED S.Owaki Kusano	CLIENT DWG NO. 4817C-17-02-026
DRAWN	
SCALE 1/300	
MHI PROJECT NO. 32221	MHI DWG NO. KZB-01-M1177

MITSUBISHI HEAVY INDUSTRIES,LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	25 Mar 2002	Revised at Marked Parts	MJ	S.O	Y.O
2	21 Mar 2003	Revised at Marked Parts			
b	16 Apr 2003	Issued for construction			

A	INSULATED ROOF CLADDING PANEL (t=50mm)
B	METAL COPING
C	GLAZED CERAMIC TILE (4.5cm x 9.0cm)
D	GLAZED CERAMIC TILE (8.0cm x 8.0cm)
E	EXTRUDED CEMENT PANEL WITH COLORED COATING
G	AGGREGATE (6mm ILAN STONE) EXPOSED FINISH BY WASH
H	ENAMEL PAINT ON STEEL STRUCTURE OR STEEL PANEL
I	STAINLESS STEEL DOOR
J	ALUMINUM WINDOW WITH REFLECTIVE GLASS
K	ALUMINUM WINDOW WITH WIRED LAMINATED SAFETY GLASS (1-8 CLEAR)
L	ROLLER SHUTTER (STAINLESS STEEL)
M	ALUMINUM LOUVER
N	ALUMINUM PANEL WITH PVDF COATING
O	STAINLES STEEL PANEL
P	CERAMIC TILE (9.5cm x 9.5cm)

WEST ELEVATION

(A)(B) LINE SIDE

APPROVED
YOKOHAMA ENGINEERING CONSULTANTS, LTD.
DATE 92/9/16

FOR CONSTRUCTION

For 3rd Projection

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	
APPROVED	Y.Okazaki
CHECKED	Kuwano
DESIGNED	H.Sugata
DRAWN	
SCALE	1/300
LHI PROJECT NO.	32221

TITLE: PLANT BUILDING ELEVATION (1)

CLIENT DWG NO. 4817C-17-02-027

MHI DWG NO. KZB-01-M1178

MITSUBISHI HEAVY INDUSTRIES,LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS

REV. NO. b

DRAWN ISSUED 92.9.19

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
2	23 Mar. 2022	Revised at Marked Parts	M.J	S.O	Y.O
1	23 Mar. 2023	Revised at Marked Parts	[illegible]		[illegible]
b	14 April	Issued for construction		[illegible]	[illegible]

(A)	INSULATED ROOF CLADDING PANEL (t=50mm)
(B)	METAL COPING
(C)	GLAZED CERAMIC TILE (4.5cm x 9.0cm)
(D)	GLAZED CERAMIC TILE (8.0cm x 8.0cm)
(E)	EXTRUDED CEMENT PANEL WITH COLORED COATING
(G)	AGGREGATE (6mm ILAN STONE) EXPOSED FINISH BY WASH
(H)	ENAMEL PAINT ON STEEL STRUCTURE OR STEEL PANEL
(I)	STAINLESS STEEL DOOR
(J)	ALUMINUM WINDOW WITH REFLECTIVE GLASS
(K)	ALUMINUM WINDOW WITH WIRED LAMINATED SAFETY GLASS (t=8 CLEAR)
(L)	ROLLER SHUTTER (STAINLESS STEEL)
(M)	ALUMINUM LOUVER
(N)	ALUMINUM PANEL WITH PVDF COATING
(O)	STAINLES STEEL PANEL
(P)	CERAMIC TILE (9.5cm x 9.5cm)

APPROVED
[illegible] SATISFY THE CONTRACTOR
[illegible] ENGINEERING CONSULTANTS, LTD.
BY [illegible] DATE 93/4/16

SOUTH ELEVATION
(24) LINE SIDE

NORTH ELEVATION
(1)(8) LINE SIDE

For 3rd Projection

行政院環境保護署
宜蘭縣利澤地區資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

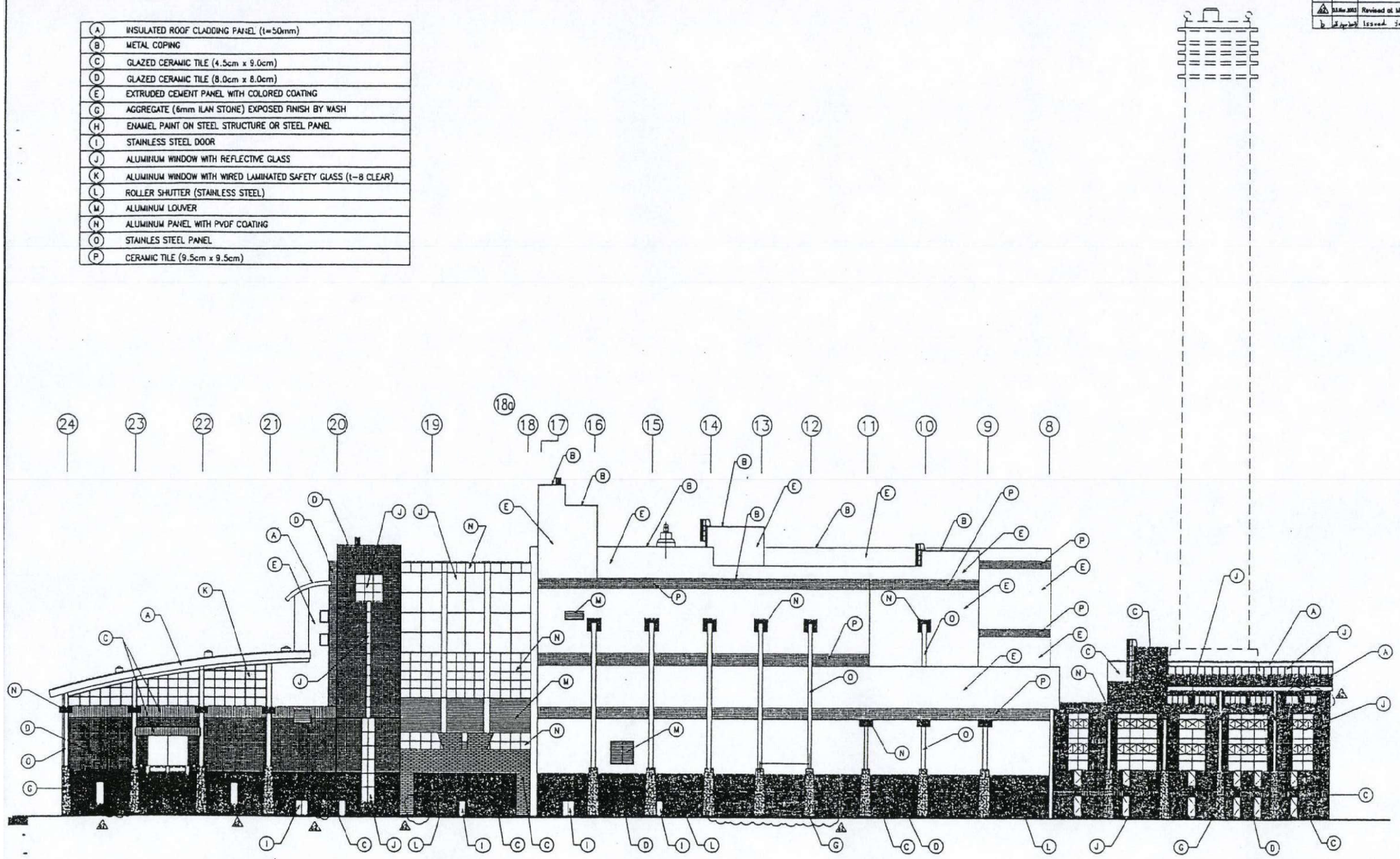
CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	TITLE: PLANT BUILDING ELEVATION (2)
APPROVED Y.Okazaki	
CHECKED Kuwana	
DESIGNED H.Sugita	
DRAWN	CLIENT DWG NO. 4817C-17-02-028
SCALE 1/100	MHI PROJECT NO. 32221
	MHI DWG NO. KZB-01-M1179

MITSUBISHI HEAVY INDUSTRIES,LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED REV. NO. 1

FOR CONSTRUCTION
This drawing has approved by the Engineer on [illegible] per Letter [illegible]

(A)	INSULATED ROOF CLADDING PANEL (t=50mm)
(B)	METAL COPING
(C)	GLAZED CERAMIC TILE (4.5cm x 9.0cm)
(D)	GLAZED CERAMIC TILE (8.0cm x 8.0cm)
(E)	EXTRUDED CEMENT PANEL WITH COLORED COATING
(G)	AGGREGATE (6mm ILAN STONE) EXPOSED FINISH BY WASH
(H)	ENAMEL PAINT ON STEEL STRUCTURE OR STEEL PANEL
(I)	STAINLESS STEEL DOOR
(J)	ALUMINUM WINDOW WITH REFLECTIVE GLASS
(K)	ALUMINUM WINDOW WITH WIRED LAMINATED SAFETY GLASS (t-8 CLEAR)
(L)	ROLLER SHUTTER (STAINLESS STEEL)
(M)	ALUMINUM LOUVER
(N)	ALUMINUM PANEL WITH PVDF COATING
(O)	STAINLES STEEL PANEL
(P)	CERAMIC TILE (9.5cm x 9.5cm)

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	25.Nov.2002	Revised at Marked Parts	M.I	S.O	Y.O
2	13.Mar.2003	Revised at Marked Parts	[illegible]		
b	[illegible]	Issued for construction			



EAST ELEVATION

(Q) LINE SIDE

APPROVED

DATE 92/4/16

FOR CONSTRUCTION

For 3rd Projection

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程

中央信託局招標案號 LP5-900039-2

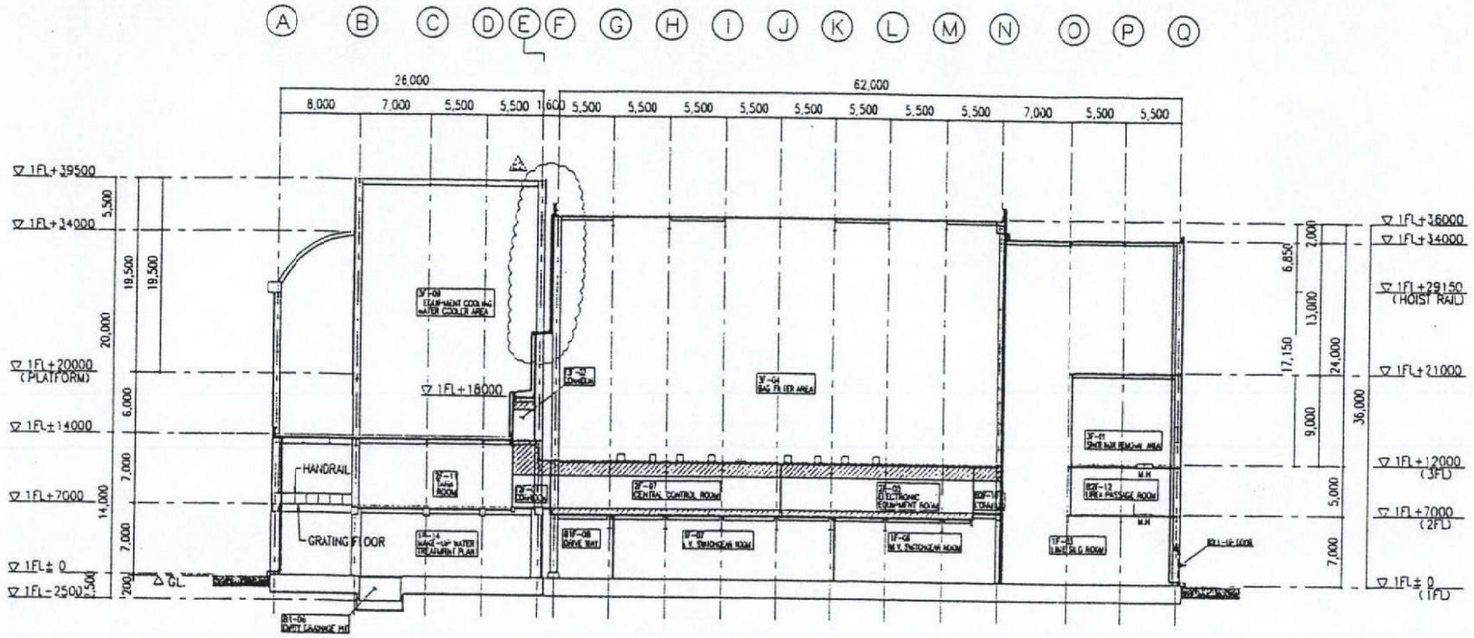
中央信託局契約編號 02-LP5-0189

CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	TITLE: PLANT BUILDING ELEVATION (3)
APPROVED Y.Ohezaki	
CHECKED Kawano	
DESIGNED H.Sugita	
DRAWN	CLIENT DWG NO. 4817C-17-02-029
SCALE 1/100	
MHI PROJECT NO. 32221	MHI DWG NO. KZB-01-M1180

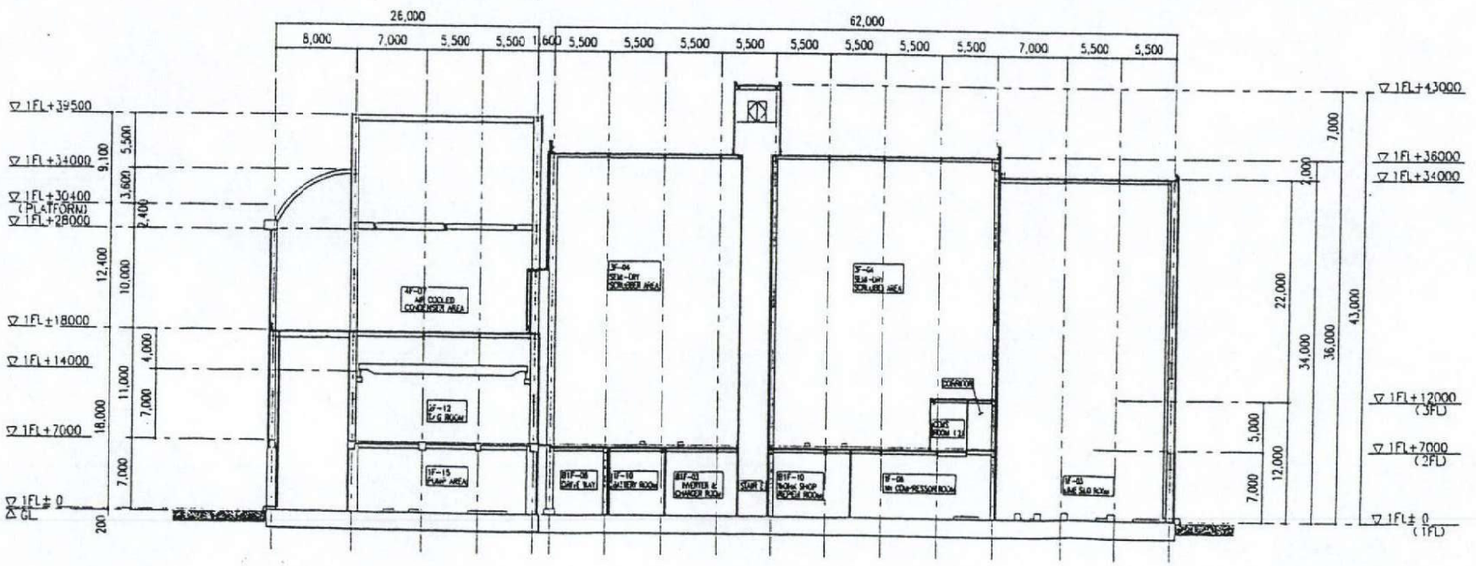
MITSUBISHI HEAVY INDUSTRIES,LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

REV. NO. 0 DRAWN ISSUED

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
4	23 Nov 2012	1. Added Room No. and Dimensions 2. Revised at Marked Parts	MJ	S.O	Y.O
3	23 Nov 2013	Revised at Marked Parts	[illegible]		[illegible]
b	3 Sep 2014	Issued for Construction		[illegible]	[illegible]



SECTION ⑪～⑫



SECTION ⑬～⑭

APPROVED
SYNCHRON ENGINEERING CONSULTANTS, LTD.
DATE 12/9/16

FOR CONSTRUCTION

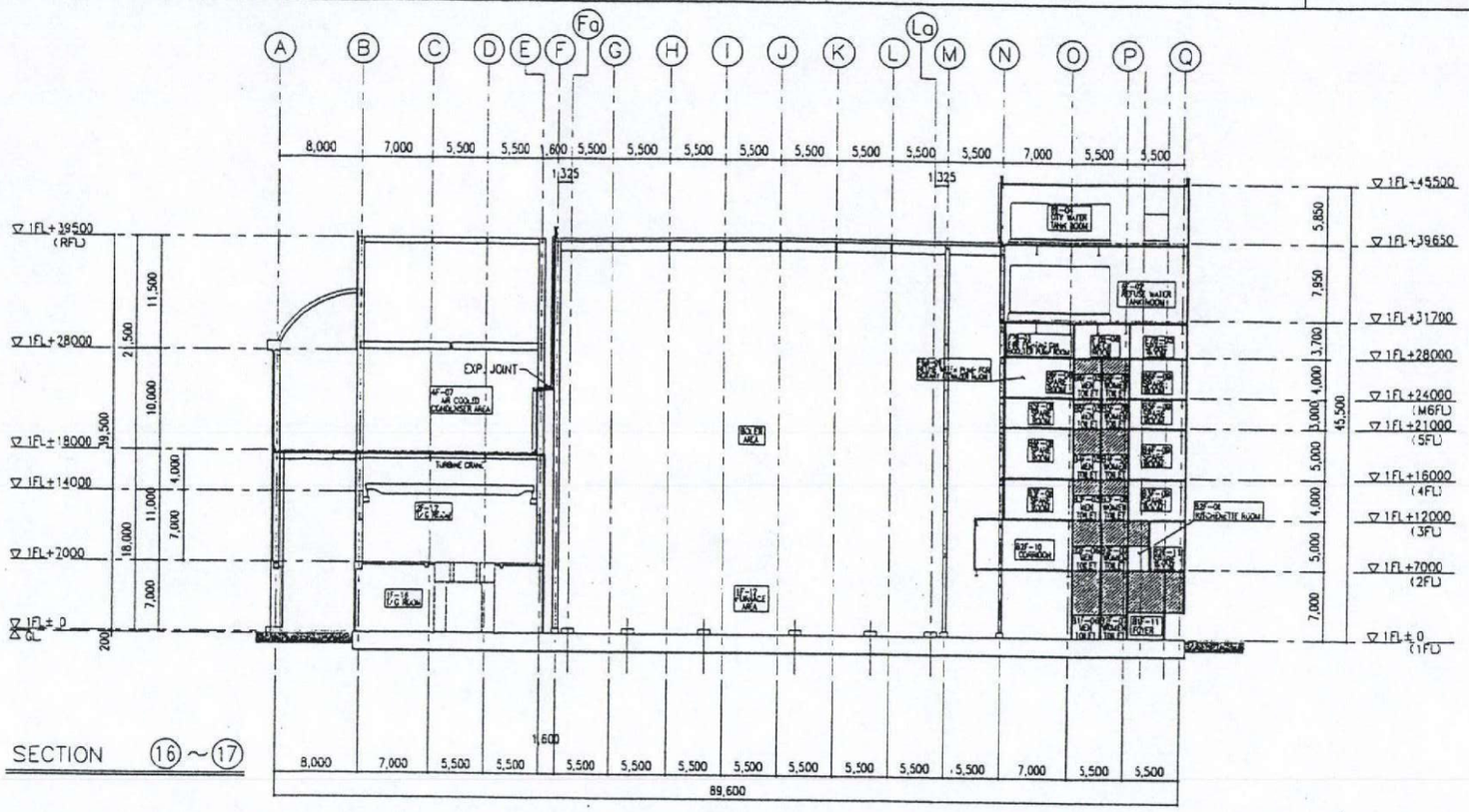
For 3rd Projection

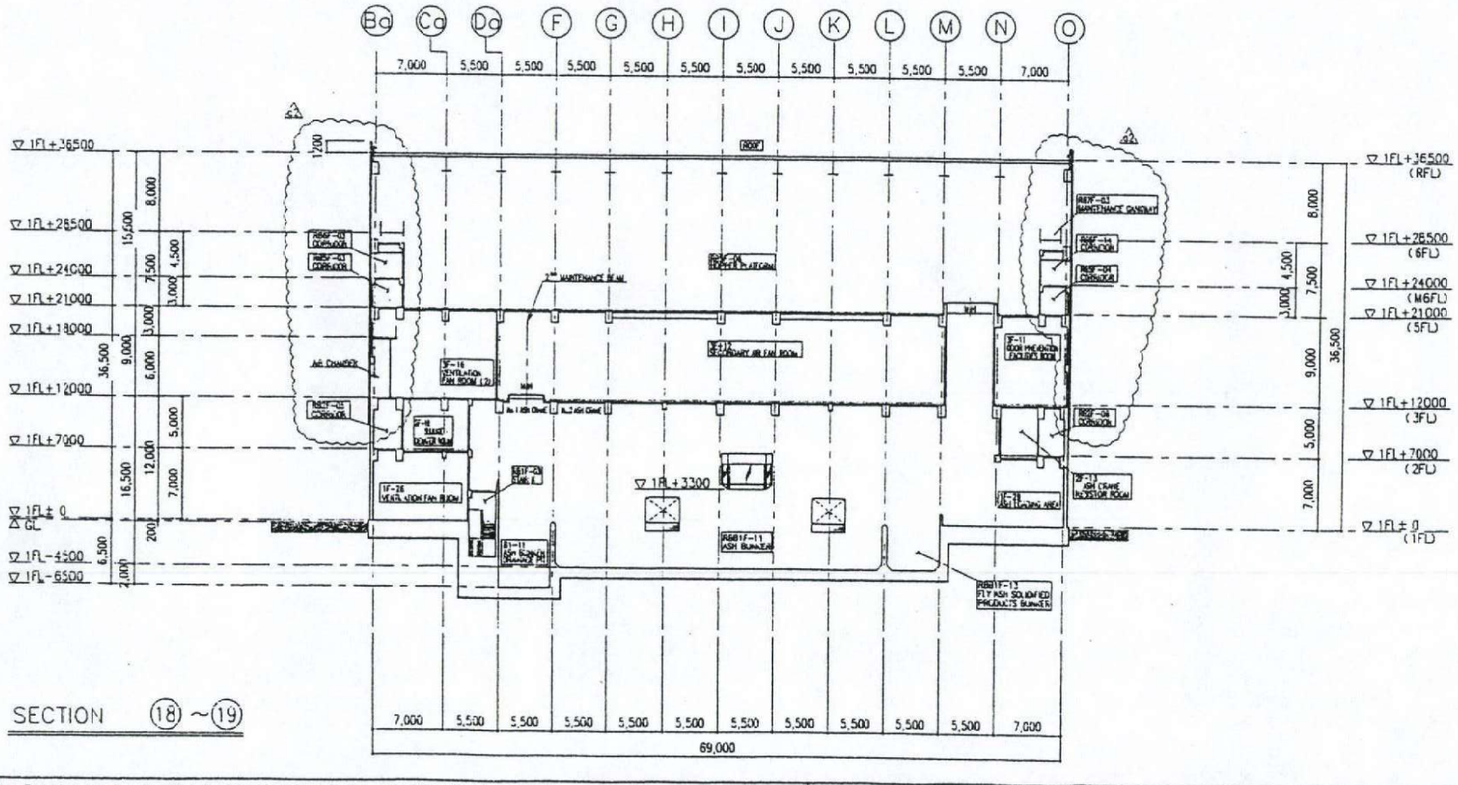
行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠擴建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	TITLE: PLANT BUILDING SECTION (1)
APPROVED Y.Okazaki	
CHECKED	
DESIGNED S.Gwaki Kuwano	CLIENT DWG NO. 4817C-1.7-02-030
DRAWN	
SCALE 1/300	MHI DWG NO. KZB-01-M1181
MHI PROJECT NO. 32221	

MITSUBISHI HEAVY INDUSTRIES,LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
2	23 Mar. 2012	1. Added Room No. and Dimensions	M.I	S.O	Y.O
1	23 Mar. 2012	Revised at Marked Parts			
0	6 Apr. 2012	Issued for construction			





APPROVED FOR CONSTRUCTION
SINOTECH ENGINEERING CONSULTANTS, LTD.
DATE 101/4/11

FOR CONSTRUCTION
This drawing is for construction
Engineer DATE

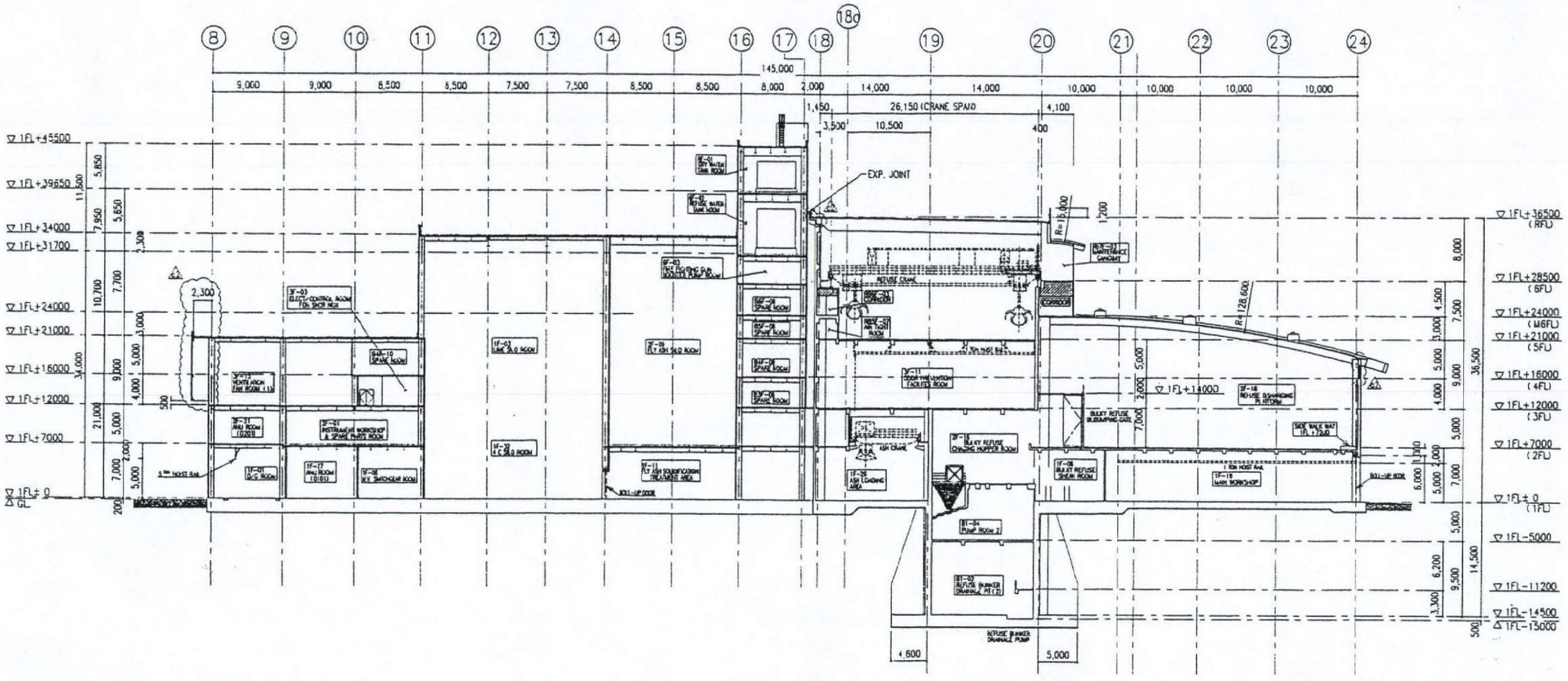
For 3rd Angle Projection

行政院環境保護署
宜蘭縣利澤地狀資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	TITLE: PLANT BUILDING SECTION (2)
APPROVED Y.Onozeki	
CHECKED	
DESIGNED S.Owaki Kusano	CUSTOMER DWG NO. 4817C-17-02-031
DRAWN	
SCALE 1/300	
MHI PROJECT NO. 32221	MHI DWG NO. KZB-01-M1182

MITSUBISHI HEAVY INDUSTRIES,LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	25 Nov 2002	Added Room No. and Dimensions.	M.I	S.O	Y.O
b	23 Apr 2003	Revised at Marked Parts			
	2 Apr 2003	Issued for combination			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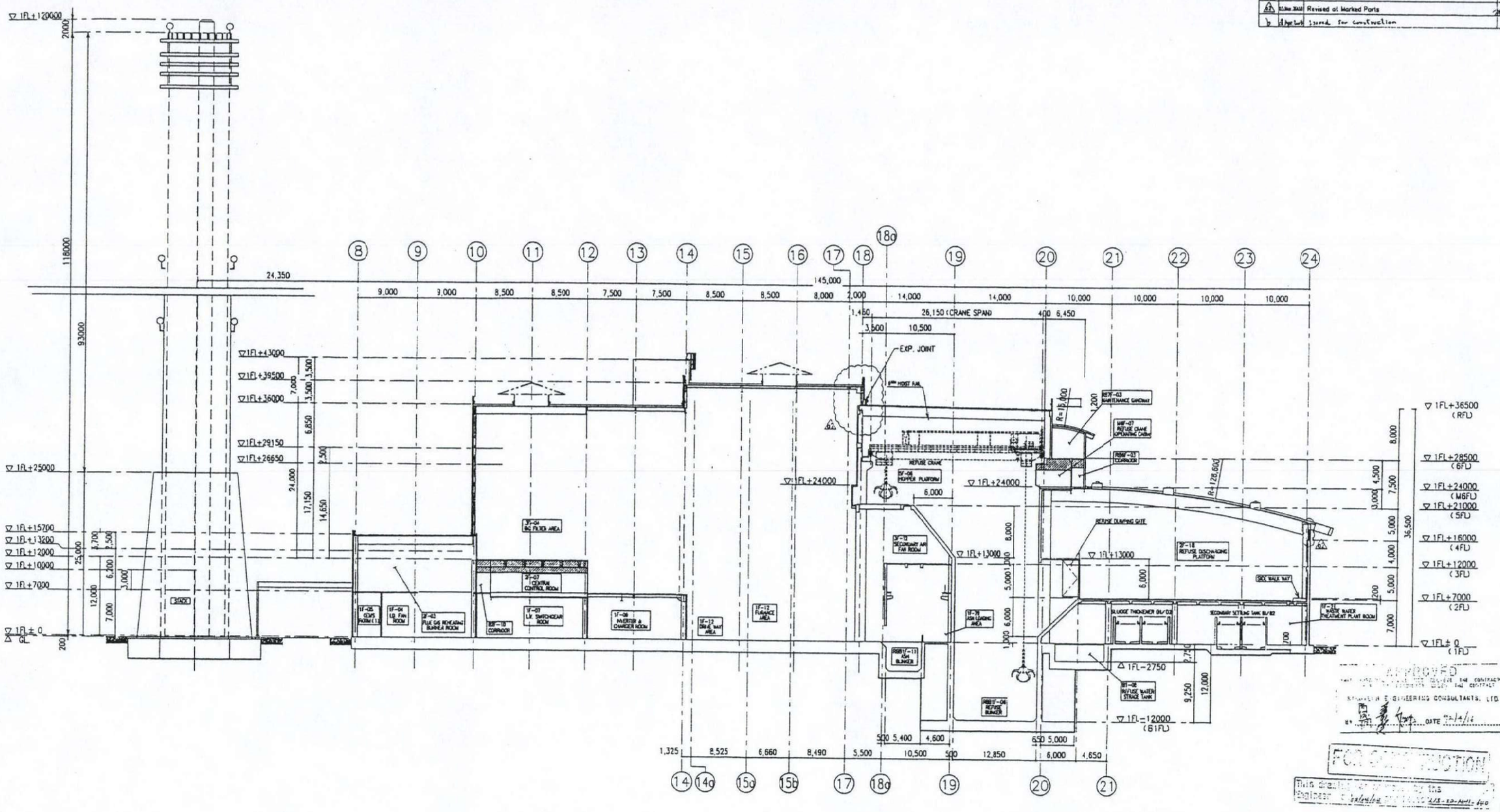
10,000
10,000
10,000
1,450
26,150 (CRANE SPAN)
4,100
3,500
10,500
400
EXP. JOINT
R=15,000
1,200
R=126,600
▽1FL+45500
▽1FL+39650
▽1FL+34000
▽1FL+31700
▽1FL+24000
▽1FL+21000
▽1FL+16000
▽1FL+12000
▽1FL+7000
▽1FL±0
△GL
▽1FL+36500 (RFL)
▽1FL+28500 (6FL)
▽1FL+24000 (M6FL)
▽1FL+21000 (5FL)
▽1FL+16000 (4FL)
▽1FL+12000 (3FL)
▽1FL+7000 (2FL)
▽1FL+14000
▽1FL±0 (1FL)
▽1FL-5000
▽1FL-11200
▽1FL-14500
△1FL-15000
2,300
RETUSE CRANE
CORRIDOR
1F-03 MAINTENANCE GARAGE
1F-04 CONTROL ROOM
1F-05 AIR LIGHT ROOM
1F-06 SPARE ROOM
1F-07 SPARE ROOM
1F-08 SPARE ROOM
1F-09 SPARE ROOM
1F-10 SPARE ROOM
1F-11 DOOR PANTOGRAPH FACILITIES ROOM
1F-12 BULKY REFUSE CHARGING HOPPER ROOM
1F-13 REFUSE DISMANTLING PLATFORM
1F-14 BULKY REFUSE SHEAR ROOM
1F-15 MAIN WORKSHOP
1F-16 BULKY REFUSE BUILDUPING CAR
SIDE WALK BAT EL+17.00
1F-17 AHU ROOM (D101)
1F-18 AHU ROOM (D102)
1F-19 AHU ROOM (D103)
1F-20 AHU ROOM (D104)
1F-21 AHU ROOM (D201)
1F-22 AHU ROOM (D202)
1F-23 AHU ROOM (D203)
1F-24 AHU ROOM (D204)
1F-25 ASH LOADING AREA
1F-26 ASH CRANE
1F-27 FLY ASH SOLIDIFICATION TREATMENT AREA
1F-28 FLY ASH SILO ROOM
1F-29 FLY ASH SILO ROOM
1F-30 FLY ASH SILO ROOM
1F-31 FLY ASH SILO ROOM
1F-32 FLY ASH SILO ROOM
1F-33 FLY ASH SILO ROOM
1F-34 FLY ASH SILO ROOM
1F-35 FLY ASH SILO ROOM

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
4	25 Nov 2002	Added Room No. and Dimensions.	M.I	S.O	Y.O
3	13 Mar 2003	Revised at Marked Parts			
2	14 April 2003	Issued for construction			



SECTION Ⓗ~Ⓘ

APPROVED
SINOTECH ENGINEERING CONSULTANTS, LTD.
DATE 92/4/16

FOR CONSTRUCTION

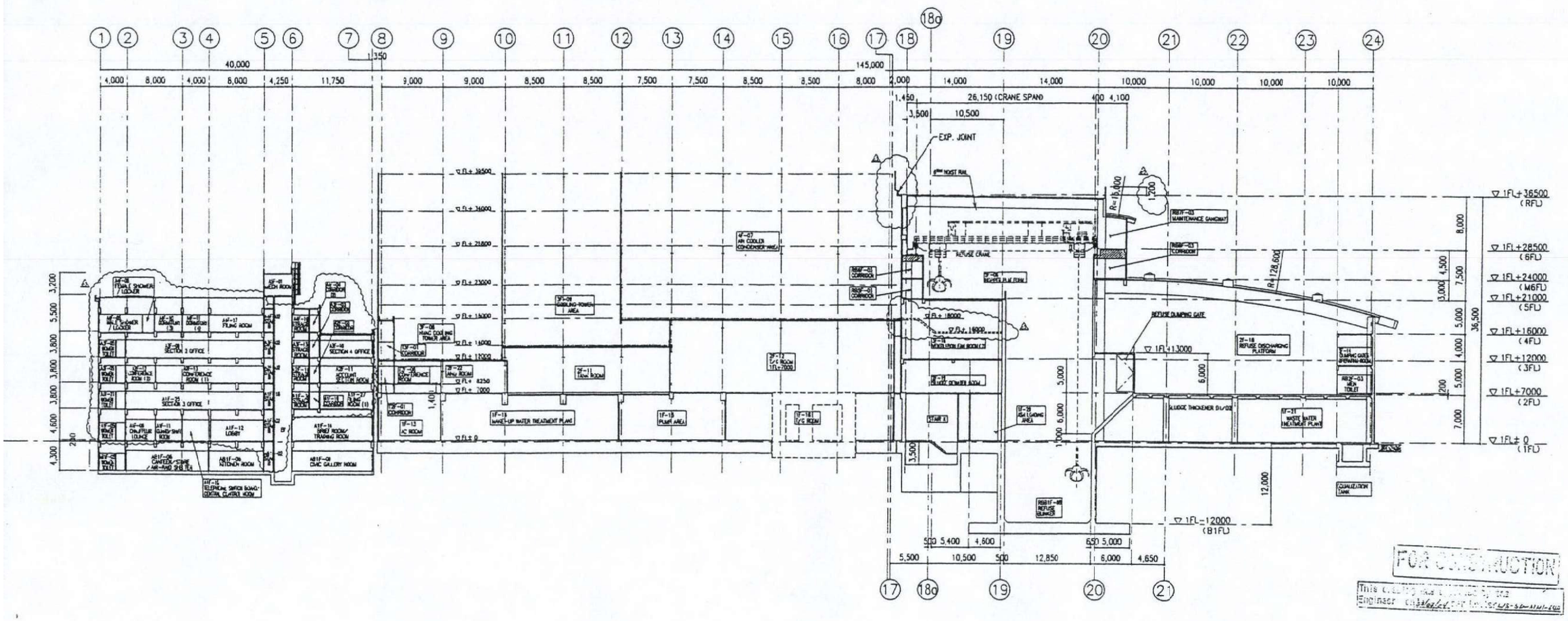
For 3rd Projection

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	TITLE: PLANT BUILDING SECTION (4)
APPROVED Y.Okazaki	
CHECKED	
DESIGNED S.Owaki Kusano	CLIENT DWG NO. 4817C-17-02-033
DRAWN	
SCALE 1/300	
MHI PROJECT NO. 32221	MHI DWG NO. KZB-01-M1184

NITSUBISHI HEAVY INDUSTRIES,LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN CHECKED REV. NO. 4

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	25 Nov. 2002	Added Room No. and Dimensions.	M.I	S.O	Y.O
b	23 Jan. 2003	Revised at Marked Parts			
	1 April 03	Issued for construction			



SECTION Ⓒ~Ⓓ

FOR CONSTRUCTION

This drawing approved by the Engineer

For 3rd Projection

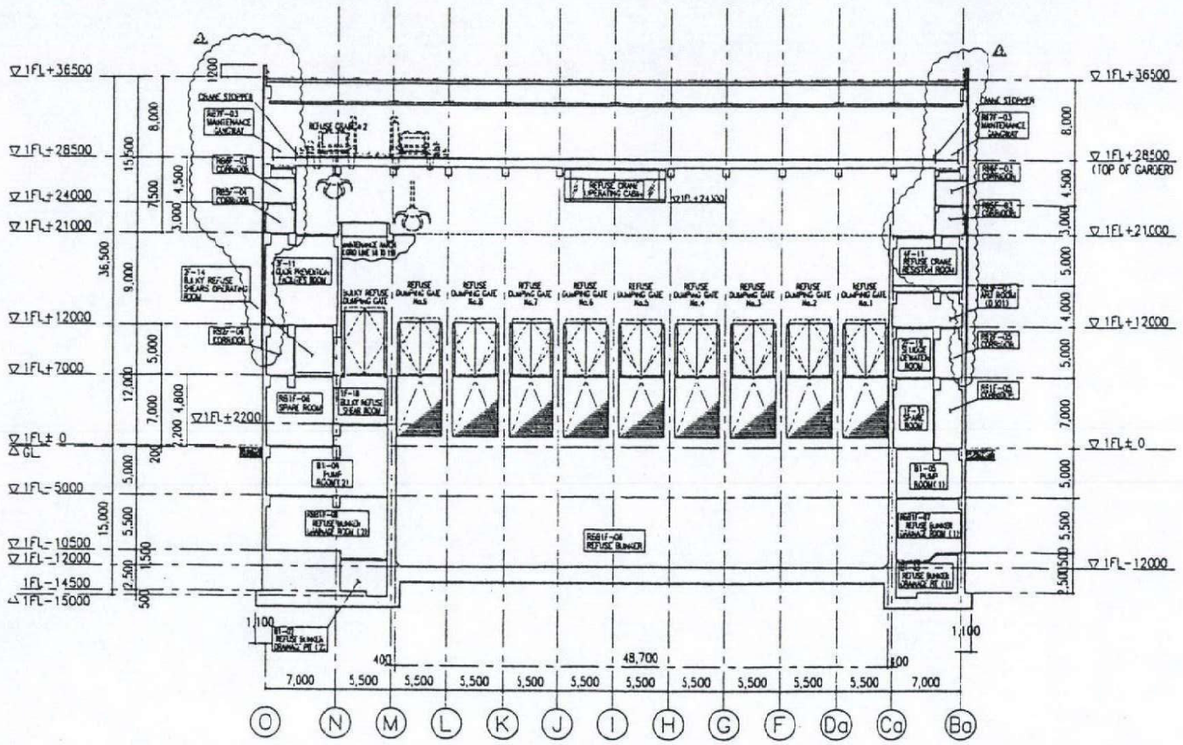
APPROVED
SINOTECH ENGINEERING CONSULTANTS, LTD.
DATE 92/2/16

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

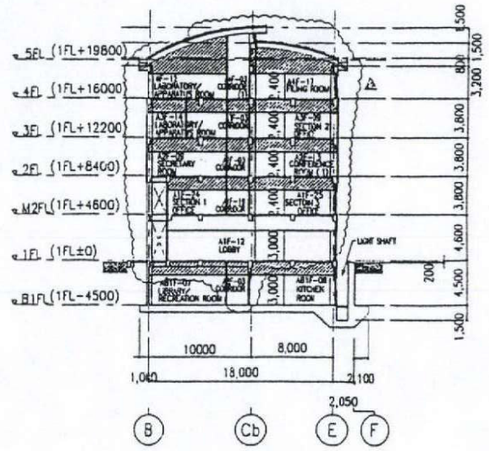
CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	TITLE: PLANT BUILDING SECTION (5)
APPROVED Y.Okazaki	
CHECKED	
DESIGNED S.Owaki Kusano	CLIENT DWG NO. 4817C-17-02-034
DRAWN	
SCALE 1/300	MHI DWG NO. KZB-01-M1185
MHI PROJECT NO. 32221	

MITSUBISHI HEAVY INDUSTRIES,LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
REV. NO. b
DRAWN ISSUED

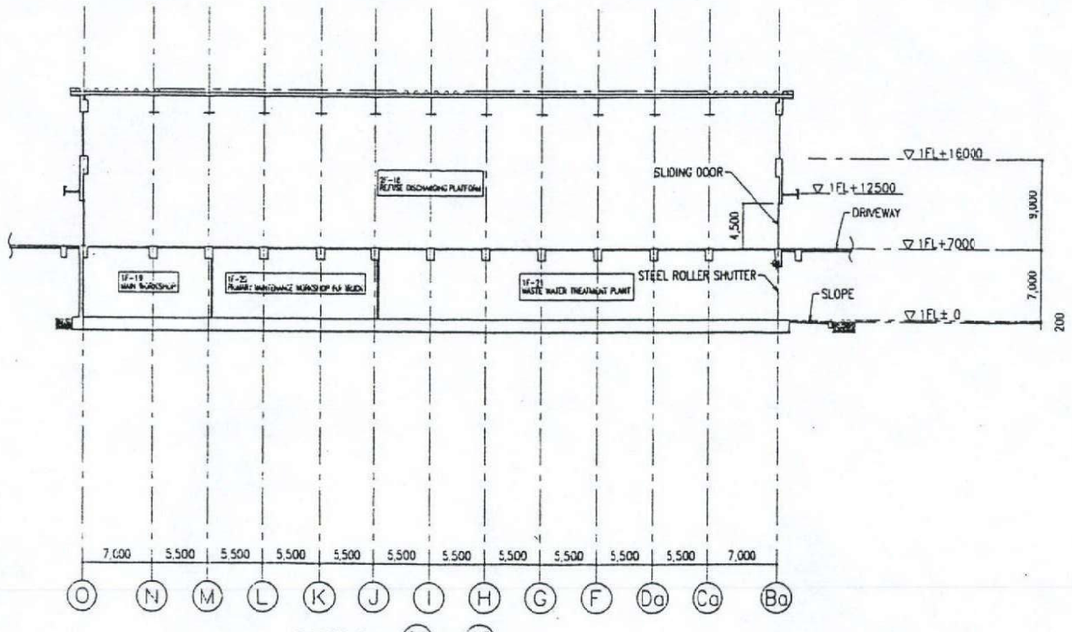
NO.	DATE	DESCRIPTION	BY	CHKD	APRD
2	93.Jan.30(A)	Added Room No. and Dimensions.	M.I	S.O	Y.O
1	93.Mar.3(A)	Revised at Marked Parts			
b	92.Sep.3(A)	Issued for construction			



SECTION (19)~(20)



SECTION (4)~(5)



SECTION (22)~(23)

FOR CONSTRUCTION

For 3rd Projection

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

CIVIL ENGINEERING SECTION POWER & ENVIRONMENTAL PLANT CONSTRUCTION DEPARTMENT	TITLE: PLANT BUILDING SECTION (6)
APPROVED Y.Omachi / CHECKED Kuwano / DESIGNED M.Sugita / DRAWN	CLIENT DWG NO. 4817C-17-02-035
SCALE 1/300	MHI DWG NO. KZB-01-M1186
MHI PROJECT NO. 32221	REV. NO. b

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	

EQUIPMENT SYMBOLS

- WASTE HEAT RECOVERY BOILER
- REFUSE FEEDING HOPPER
- GRATE SYSTEM
- SLAG EXTRACTOR
- ISOLATION DAMPER
- AIR COOLED CONDENSER
- FEED WATER TANK WITH DEAERATOR
- AIR PREHEATER
- VERTICAL TANK
- HORIZONTAL TANK
- ELECTRIC HEATER
- DISTRIBUTOR OR HEADER
- STEAM TURBINE
- GENERATOR
- HYDRAULIC OIL PUMP
- VIBRATION CONVEYOR
- SERVICE TANK
- SILO
- BAG FILTER
- PUMP
- FAN, BLOWER, COMPRESSOR
- POSITIVE DISPLACEMENT PUMP
- STEAM JET AIR EJECTOR
- STACK
- IGNITION BURNER, BOOSTER BURNER
- OIL STORAGE TANK
- FLEXIBLE HOSE
- DAILY TANK
- EQUIPMENT COOLING TOWER
- IGNITER
- HEAT EXCHANGER
- U TUBE HEAT EXCHANGER
- AERATOR
- ROOF TANK
- RESERVOIR
- SILO
- AIR RESERVOIR
- CHEMICAL STORAGE TANK
- HCL GAS ABSORBER, NaOH MEASURING TANK
- CARBON FILTER, CATION EXCHANGER MIX-BED EXCHANGER
- DEGASIFIER
- DOUBLE FLAP VALVE
- MIXING BLOWER
- ROTARY VALVE
- SCREW CONVEYOR
- COOLING FAN, AGITATOR
- DAMPER
- DESUPER HEATER
- POWER CYLINDER
- FILTER
- VENT DUST SCRUBBER

VALVE SYMBOLS

- POWER ASSISTED NON RETURN VALVE
- SOLENOID VALVE
- THREE WAY VALVE
- PRESS-REDUCING REGULATOR SELF CONTAINED
- STOP VALVE
- STOP CHECK VALVE
- Y-TYPE BLOWDOWN VALVE
- STRAINER
- SAFETY VALVE
- PRESSURE-REDUCING VALVE
- CHECK VALVE
- EMERGENCY STOP VALVE
- MOTOR OPERATED VALVE
- POWER ASSISTED ON-OFF VALVE
- PNEUMATIC CONTROL VALVE
- AUTOMATIC RECIRCULATION VALVE
- KNIFT GAGE VALVE
- FLOAT BALL VALVE

INSTRUMENTATION AND MISCELANEOUS DEVICES

- SILENCER
- VENT
- STEAM TRAP
- EXPANSION JOINT
- SPECTACLE BLIND
- MAGNETIC FLOW METER
- VENTURI TUBE
- DUPLEX BASKET TYPE STRAINER
- DRAIN PORT
- FLOW METER
- ORIFICE

LINE SYMBOLS

- Steam, Wastewater, Treated Water, Flue Gas
- Boiler, Feedwater, Drain, Condensate
- Air, Compressed Air
- Sludge
- Ca(OH)2 Slurry
- Fly Ash
- Bypass

INSTRUMENT LINE SYMBOLS

- CONNECTION TO PROCCESS
- PNEUMATIC
- ELECTORIC SIGNAL OR INTERNAL SYSTEM LINK (SOFTWARE OR DATA LINK)
- CAPILLARY TUBE
- HYDRAULIC SIGNAL
- ELECTROMATIC OR SONIC SIGNAL
- SIGNAL CONNECTION POINT

INSTRUMENT INDENTIFICATION

- LOCALLY MOUNTED
- MOUNTED ON MAIN CONTROL PANEL
- MOUNTED ON LOCAL PANEL
- CRT DISPLAY
- UNDEFINED INTERLOCK LOGIC

0469/4 LES-SP-MM2-168

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINGTECH ENGINEERING CONSULTANTS, LTD.
BY 黃雅賢 DATE 91. 11. 18

INSTRUMENT IDENTIFICATION

VARIABLES \ INSTRUMENT FUNCTION		ALARM	CONTROLLER	CONTROL VALVE	DIFFERENTIAL	PRIMARY ELEMENT	GAGE	INDICATOR	TOTALIZER	PEN RECORDER	SWITCH	TRANSMITTER	OTHER	ON/OFF CONTROL		
		A	C	CV	D	E	G	I	Q	R	S	T	Y	O		
ANALYSIS	A	AA	AC	-	-	AE	-	AI	-	AR	AS	AT	AY			
CONDUCTIVITY	C							CI		CR		CT				
FLOW	F	FA	FC	FCV	-	FE	-	FI	FQ	FR	FS	FT	FY			
HAND	H										HS					
CURRENT	I	IA	IC					II		IR	IS	IT				
TIME	K		KC					KI				KT		KO		
LEVEL	L	LA	LC	LCV	-	-	LG	LI	-	LR	LS	LT	LY			
PRESSURE	P	PA	PC	PCV	PD	-	-	PI	-	PR	PS	PT	PY			
SPEED	S	SA	SC		SD			SI			SS	ST	SY			
TEMPERATURE	T	TA	TC	TCV	-	TE	-	TI	-	TR	TS		TY			
POSITION	Z		ZC					ZI								
OTHER	-	-A	-C	-	-	-E	-	-I	-	-R	-S	-T	-Y			
REMARK	ADD SUFFIX LETTERS H, L, HH OR LL TO SWITCHES AND ALARMS TO INDICATE HIGH, LOW, HIGH OR LOW LOW															

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	05 NOV. 2002	Issued for construction			
2	10.Sep.02	Revised in accordance with customer's comments and/or design progress.			
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I

行政院環境保護署
宜蘭縣利澤垃圾資源回收(焚化)廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

INSTRUMENT & ELECTRIC DESIGNING SECTION, ENVIRONMENTAL PLANT, No.1 DESIGNING SECTION

APPROVED A.YAMADA K.IKEBE
CHECKED M.HOSHINO
DESIGNED M.H
DRAWN
SCALE
MHI PROJECT NO. 32221

TITLE: PROCESS FLOW DIAGRAM -SYMBOLS AND LEGEND
CLIENT DWG NO. 4817C-01-01-039
MHI DWG NO. IMG-01-A9046

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED
REV. NO. a

(THIS SHOWS No.1 TRAIN. No.2 TRAIN IS SAME AS THIS SYSTEM.)

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	

DUMPING GATE #1~#9

HYDRO DRIVE SYSTEM

CONCENTRATED DEODORIZER STORAGE TANK XG20B1

DEODORIZER MIXING TANK XG10B1

DEODORIZER SOLUTION SPRAY PUMP #1 & #2 XG21D1, XG22D1

CONCENTRATED DEODORIZER TRANSFER PUMP #1 & #2 XG11D1, XG12D1

DEODORIZER SPRAY NOZZLE (3×9)

REFUSE CRANE (x2)

PA10D1
PA20D1

RECEPTION HALL

BULKY-REFUSE SHEAR NK30D1

TO FEEDER, STOKER ASH EXTRACTOR

No.1 STOKER HYDRAULIC UNIT 1NF05B1

REFUSE BANKER

BRIDGE BREAKER

×2B
×2A
×2D
×2C

SIDE BURNER

FURNACE

EVA

No.1 BOILER FLY ASH CONVEYOR #1 1NP10D1

4817C-01-01-044
TO SEMIDRY SCRUBBER

REFUSE HOPPER AND CHUTE 1NF17B1

REFUSE-FEEDER

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE 91.11.18

No.1 BOILER FLY ASH CONVEYOR #2 1NP11D1

DIESEL OIL

4817C-01-01-050
TO FLY ASH ASSEMBLY CONVEYOR #1-1

4817C-01-01-050
TO FLY ASH ASSEMBLY CONVEYOR #1-2

4817C-01-01-050
TO FLY ASH ASSEMBLY CONVEYOR #1-2

4817C-01-01-050
TO FLY ASH ASSEMBLY CONVEYOR #1-1

REFUSE WEIGH BRIDGE #1 UC11B1
DITTO #2 UC12B1
ASH WEIGH BRIDGE #1 UC21B1
DITTO #2 UC22B1

WEIGH BRIDGE (x4)

SLAG EXTRACTOR 1NF45D1

SLAG VIBRATING CONVEYOR 1NQ10D1

No.1 BURNER FAN 1NJ10D1

TO EACH BURNER 1NJ20X1, 1NJ21X1, 1NJ30X1, 1NJ31X1

No.1 IGNITION BURNER AIR FAN

FOR BOILER SOOTBLOWERS AIR SEAL (1NW11D1~1NW17D1, 1NW21D1~1NW32D1)

4817C-01-01-060
WASTE WATER TREATMENT PLANT

BOILER BLOW DOWN WATER
4817C-01-01-041

TO ROTAYPARTS OF STOKER, ETC

No.1 STOKER GREASING UNIT 1NF07D1

*1 FROM REFUSE PIT

No.1 SECONDARY AIR FAN 1ND60D1

STOKER SEALING FAN 1NF51D1 1NF52D1

TURBINE 2ND BLEED

TURBINE 1ST BLEED

No.1 STEAM AIR PREHEATER 1ND10D1

1ST STAGE

2ND STAGE

No.1 PRIMARY AIR FAN 1ND10D1

FROM No.2 BOILER

ASH CRANE (x2) UN10D1 UN20D1

ASH BUNKER

ASH BUNKER DRAINAGE PIT

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	05 NOV. 2002	Issued for construction			
2	10.Sep.02	No revised parts. Issued for confirmation of approval.			
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I

行政院環境保護署
宣蘭縣利澤垃圾資源回收（焚化）廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

INSTRUMENT & ELECTRIC DESIGNING SECTION ENVIRONMENTAL PLANT NO.1 DESIGNING SECTION	TITLE: PROCESS FLOW DIAGRAM -COMBUSTION SYSTEM
APPROVED A.YAMADA K.IKEDA	CLIENT DWG NO.: 4817C-01-01-040
CHECKED M.HOSHINO	MHI PROJECT NO.: 32221
DESIGNED M.H	MHI DWG NO.: IMG-01-A9047
DRAWN	REV. NO. a
SCALE	

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

DRAWN ISSUED

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	

No.1 SILENCER FOR BOILER DRUM 1RS252I

No.1 SILENCER FOR BOILER HEATER 1RS352I

4817C-01-01-043 TO TURBINE

TO SAMPLING SYSTEM 4817C-01-01-059

No.2 BOILER

No.1 BOILER

TO SAMPLING SYSTEM 4817C-01-01-059

TO SAMPLING SYSTEM 4817C-01-01-059

SOOT BLOWERS

TO SAMPLING SYSTEM 4817C-01-01-059

TO BLOW DOWN FLASH TANK 4817C-01-01-076

TO BLOW OFF TANK 4817C-01-01-076

TO SAMPLING SYSTEM 4817C-01-01-059

TO BLOW DOWN FLASH TANK 4817C-01-01-076

TO BLOW OFF TANK 4817C-01-01-076

TO SAMPLING SYSTEM 4817C-01-01-059

TO SAMPLING SYSTEM 4817C-01-01-059

TO HP/MP PRESSURE REDUCTION VALVE 4817C-01-01-043

FROM AIR PREHEATER DRAIN DUMP 4817C-01-01-076

FROM L.P.F.W.H 4817C-01-01-042

WATER FROM MAKE UP WATER TRANSFER PUMP 4817C-01-01-061

FROM TURBINE 2ND EXTRACTION 4817C-01-01-043

FROM BLOWDOWN FLASH TANK 4817C-01-01-075

TO AIR PREHEATER DRAIN TANK 4817C-01-01-076

FEEDWATER TANK WITH DEAERATOR RL10B1

BOILER FEEDWATER PUMP #1 RL31D1

BOILER FEEDWATER PUMP #2 RL32D1

BOILER FEEDWATER PUMP #3 RL33D1

CHEMICAL DOSING 4817C-01-01-057

CHEMICAL DOSING 4817C-01-01-057

S OVERFLOW

TO BLOW-OFF TANK 4817C-01-01-057

APPROVED

THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT

SINOTECH ENGINEERING CONSULTANTS, LTD.

BY DATE 91.11.18

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	25 NOV. 2002	Issued for construction	M.H		
2	10.Sep.02	Revised in accordance with customer's comments and/or design progress.	M.H	M	
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

INSTRUMENT & ELECTRIC ENGINEERING SECTION ENVIRONMENTAL PLANT No.1 DESIGNING SECTION	
APPROVED	A.YAMADA K.IKEBE
CHECKED	M.HOSHINO
DESIGNED	M.H
DRAWN	
SCALE	
MHI PROJECT NO.	32221

TITLE: PROCESS FLOW DIAGRAM -STEAM, FEEDWATER AND CONDENSATE CYCLE (1/4)

CLIENT DWG NO. 4817C-01-01-041

MHI DWG NO. IMG-01-A9048

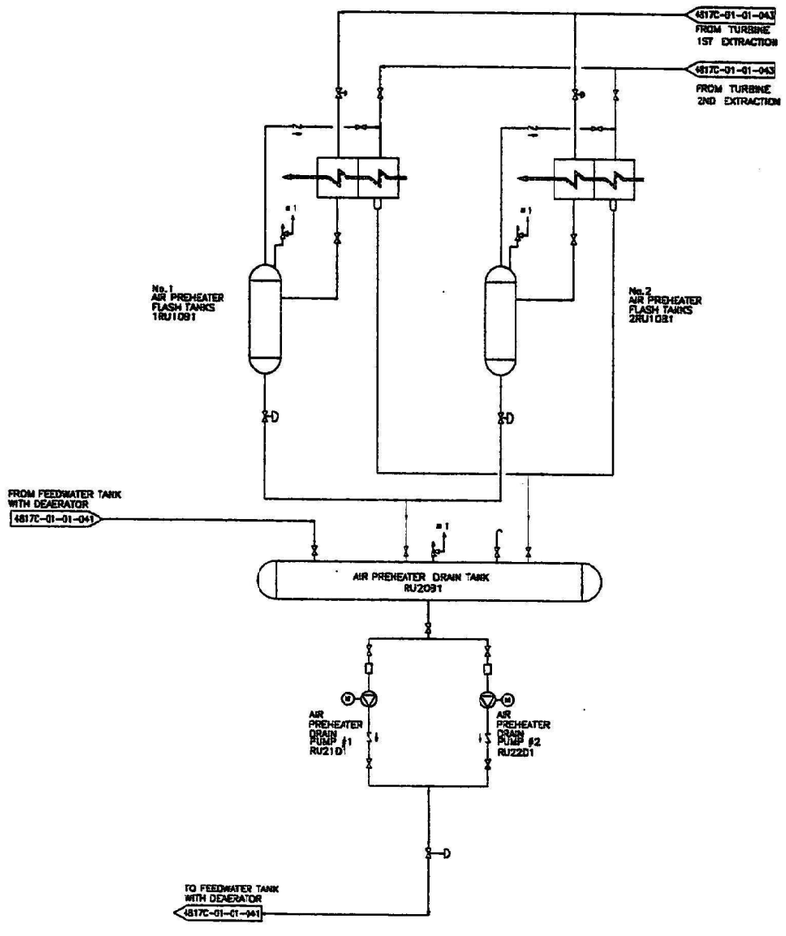
REV. NO. a

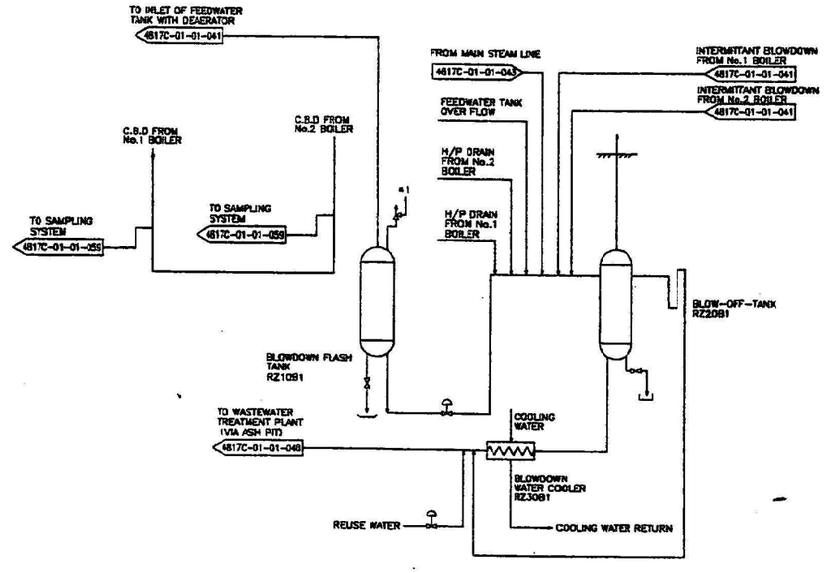
MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA BOILERS & MACHINERY WORKS

DRAWN ISSUED

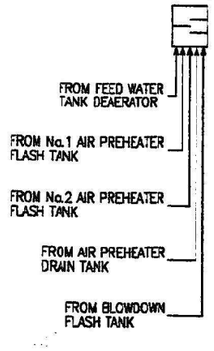
3

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	





※1 TO LP STEAM SILENCER (RS10Z1)



APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY 李祈賢 DATE 91.11.18

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	05 Aug 2002	Issued for construction			
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.			

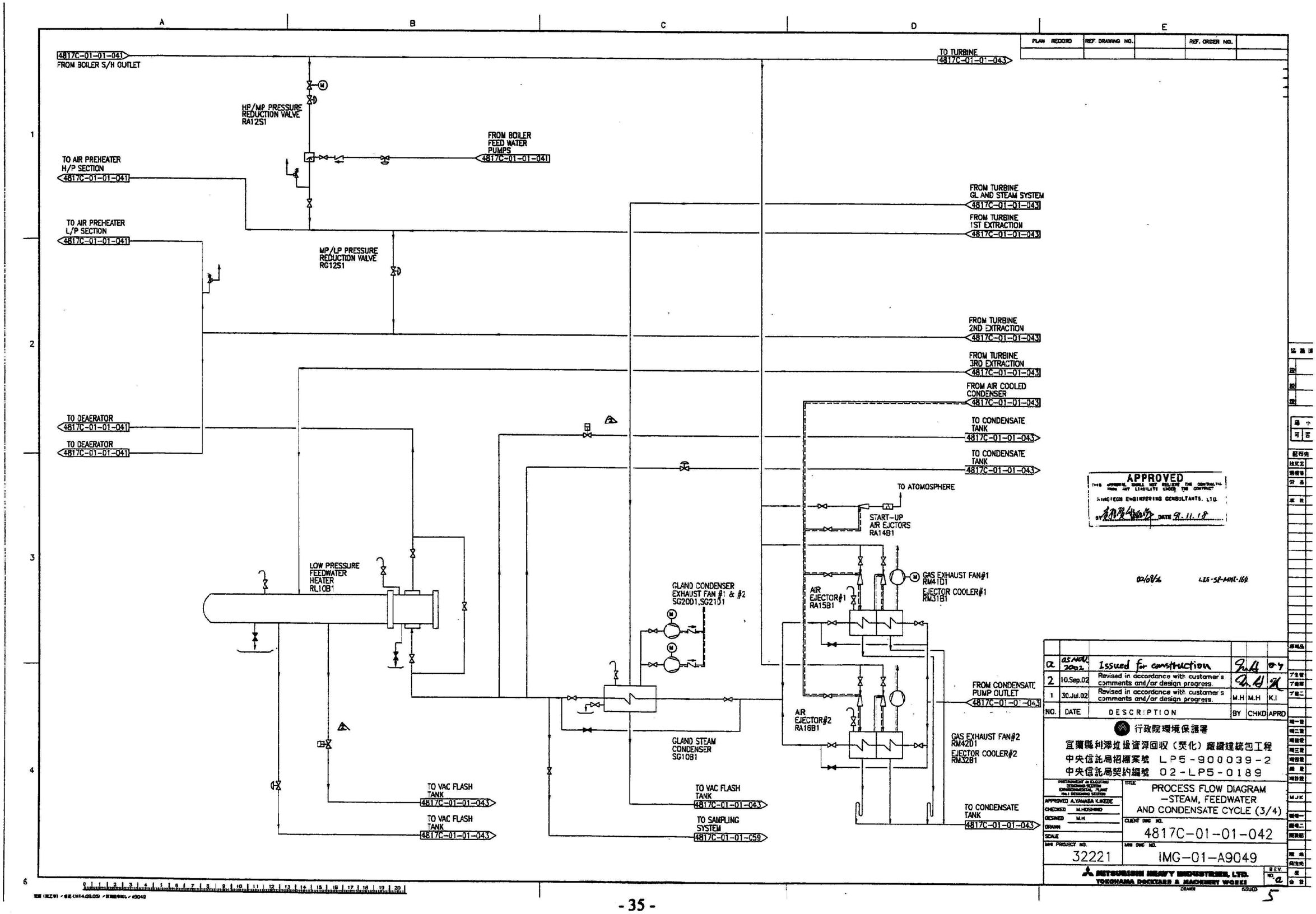
行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

APPROVED	A.YAMADA K.IKEDE
CHECKED	M.HOSHINO
DESIGNED	M.H
DRAWN	
SCALE	

TITLE: PROCESS FLOW DIAGRAM -STEAM, FEEDWATER AND CONDENSATE CYCLE (2/4)

MHI PROJECT NO. 32221
CLIENT DWG NO. 4817C-01-01-076
MHI DWG NO. IMG-01-A9376
REV NO. a

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS


4817C-01-01-041
FROM BOILER S/H OUTLET
TO TURBINE
4817C-01-01-043
HP/MP PRESSURE REDUCTION VALVE RA12S1
FROM BOILER FEED WATER PUMPS
4817C-01-01-041
TO AIR PREHEATER H/P SECTION
4817C-01-01-041
TO AIR PREHEATER L/P SECTION
4817C-01-01-041
MP/LP PRESSURE REDUCTION VALVE RG12S1
FROM TURBINE GL AND STEAM SYSTEM
4817C-01-01-043
FROM TURBINE 1ST EXTRACTION
4817C-01-01-043
FROM TURBINE 2ND EXTRACTION
4817C-01-01-043
FROM TURBINE 3RD EXTRACTION
4817C-01-01-043
FROM AIR COOLED CONDENSER
4817C-01-01-043
TO DEAERATOR
4817C-01-01-041
TO DEAERATOR
4817C-01-01-041
TO CONDENSATE TANK
4817C-01-01-043
TO CONDENSATE TANK
4817C-01-01-043
TO ATOMOSPHERE
START-UP AIR EJCTORS RA14B1
LOW PRESSURE FEEDWATER HEATER RL10B1
GLAND CONDENSER EXHAUST FAN #1 & #2 SG20D1,SG21D1
AIR EJECTOR#1 RA15B1
GAS EXHAUST FAN#1 RM41D1
EJECTOR COOLER#1 RM31B1
FROM CONDENSATE PUMP OUTLET
4817C-01-01-043
AIR EJECTOR#2 RA16B1
GAS EXHAUST FAN#2 RM42D1
EJECTOR COOLER#2 RM32B1
GLAND STEAM CONDENSER SG10B1
TO VAC FLASH TANK
4817C-01-01-043
TO VAC FLASH TANK
4817C-01-01-043
TO SAMPLING SYSTEM
4817C-01-01-C59
TO VAC FLASH TANK
4817C-01-01-043
TO CONDENSATE TANK
4817C-01-01-043
PLAN RECORD
REF. DRAWING NO.
REF. ORDER NO.
APPROVED
SINOTECH ENGINEERING CONSULTANTS, LTD.
DATE 91.11.18
02/08/26
LLS-SP-MME-164
a AS NOTED 2002 Issued for construction
2 10.Sep.02 Revised in accordance with customer's comments and/or design progress. M.H M.H K.I
1 30.Jul.02 Revised in accordance with customer's comments and/or design progress.
NO. DATE DESCRIPTION BY CHKD APRD
行政院環境保護署
宣蘭縣利澤垃圾資源回收(焚化)廠擴建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189
APPROVED A.YAMABA K.IKEDE
CHECKED M.HOSHINO
DESIGNED M.H
DRAWN
SCALE
MHI PROJECT NO. 32221
TITLE PROCESS FLOW DIAGRAM -STEAM, FEEDWATER AND CONDENSATE CYCLE (3/4)
CLIENT DWG NO. 4817C-01-01-042
MHI DWG NO. IMG-01-A9049
REV NO. a
MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED
5

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	

FROM BOILER S/H OUTLET
4817C-01-01-042

TO BLOWOFF TANK

TO GLAND STEAM CONDENSER
4817C-01-01-042

STEAM TURBINE
SA10D1

TURBINE BYPASS STEAM CONVERTING VALVE #1 & #2
RA31S1
RA32S1

TO SILENCER *

TO AIR PREHEATER H/P SECTION
4817C-01-01-042

TO VACUUM FLASH TANK

TO VACUUM FLASH TANK

TO AIR PREHEATER L/P SECTION & TO DEAERATOR
4817C-01-01-042

TO VACUUM FLASH TANK

TO VACUUM FLASH TANK

TO L.P.F.W.H
4817C-01-01-042

TO VACUUM FLASH TANK

TO VACUUM FLASH TANK

TO AIR EJECTOR
4817C-01-01-042

AIR COOLED CONDENSER #1 ~ #8
QAS1D1~QAS8D1

CONDENSATE FROM AIR EJECTOR COOLER
4817C-01-01-042

FROM GLAND STEAM CONDENSET OUTLET
4817C-01-01-042

FROM GLAND STEAM CONDENSET OUTLET
4817C-01-01-042

FROM MAKE UP WATER TRANSFER PUMP
4817C-01-01-052

CONDENSATE TANK
RM10B1

CHEMICAL INJECTION
4817C-01-01-057

CHEMICAL INJECTION
4817C-01-01-057

CONDENSATE PUMP #1
RM11D1

CONDENSATE PUMP #2
RM12D1

04/10/16 LIS-SP-MMI-202

TO AIR EJECTOR COOLER
4817C-01-01-042

FROM GRAND STEAM CONDENSER
4817C-01-01-042

VACUUM FLASH TANK
RK10B1

FROM L.P.F.W.HEATER
4817C-01-01-042

CONDENSATE RETURN PUMP #1 & #2
RK11D1
RK12D1

TO SEAL WATER HDR.

APPROVED
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SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE 91.11.18

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	05 NOV 2002	Issued for Construction	M.H	M.H	K.I
2	10.Oct.02	Revised in accordance with customer's comments.	K.I	K.I	K.I
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

INSTRUMENT & ELECTRIC DESIGNED SECTION ENVIRONMENTAL PLANT No.1 DESIGNED SECTION

APPROVED	A.YAMADA K.IKEBE
CHECKED	M.HOSHINO
DESIGNED	M.H
DRAWN	
SCALE	

TITLE: PROCESS FLOW DIAGRAM -STEAM, FEEDWATER AND CONDENSATE CYCLE (4/4)

CLIENT DWG NO. 4817C-01-01-043

M/H PROJECT NO. 32221

M/H DWG NO. IMG-01-A9050

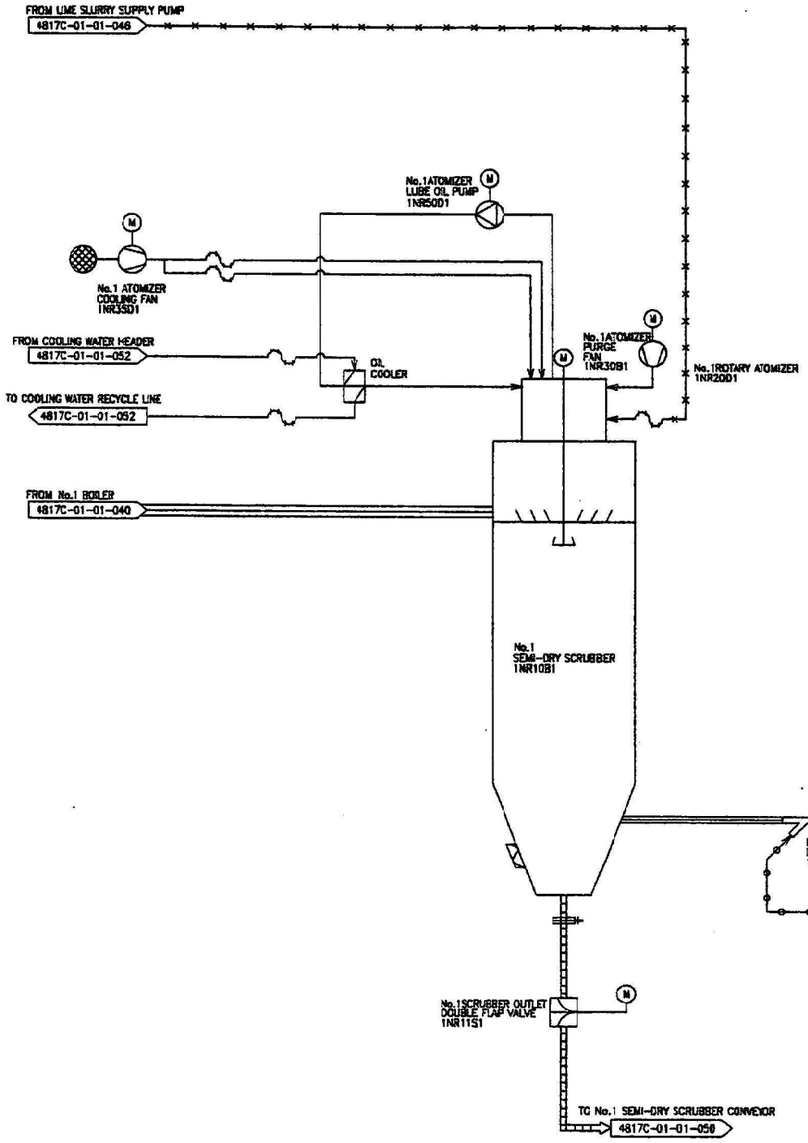
REV. NO. a

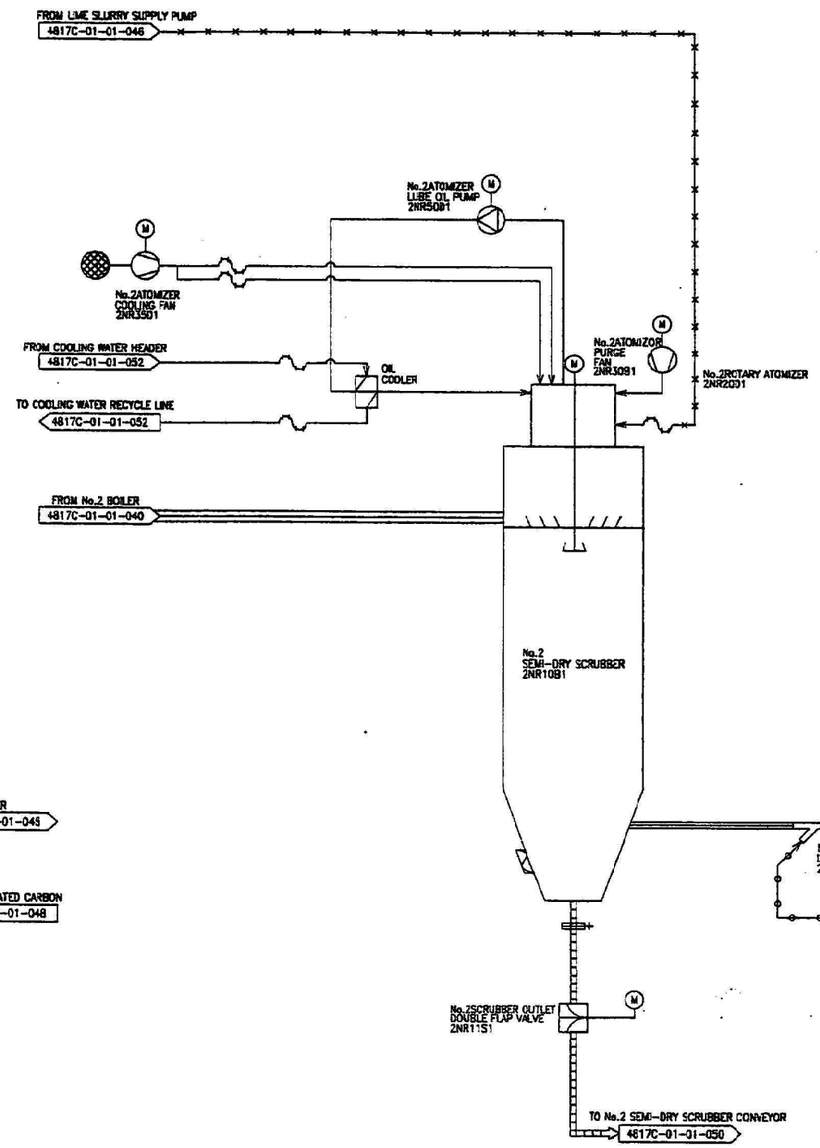
MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS

DRAWN ISSUED

* TO SILENCER RZ20Z1-0803

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	





NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	as NOV. 2002	Issued for construction			
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.			

APPROVED
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SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

INSTRUMENT & ELECTRIC DESIGNING SECTION ENVIRONMENTAL PLANT No.1 DESIGNING SECTION	
APPROVED	A.YAMADA K.OKEBE
CHECKED	M.HOSHINO
DESIGNED	M.H
DRAWN	
SCALE	
MHI PROJECT NO.	32221

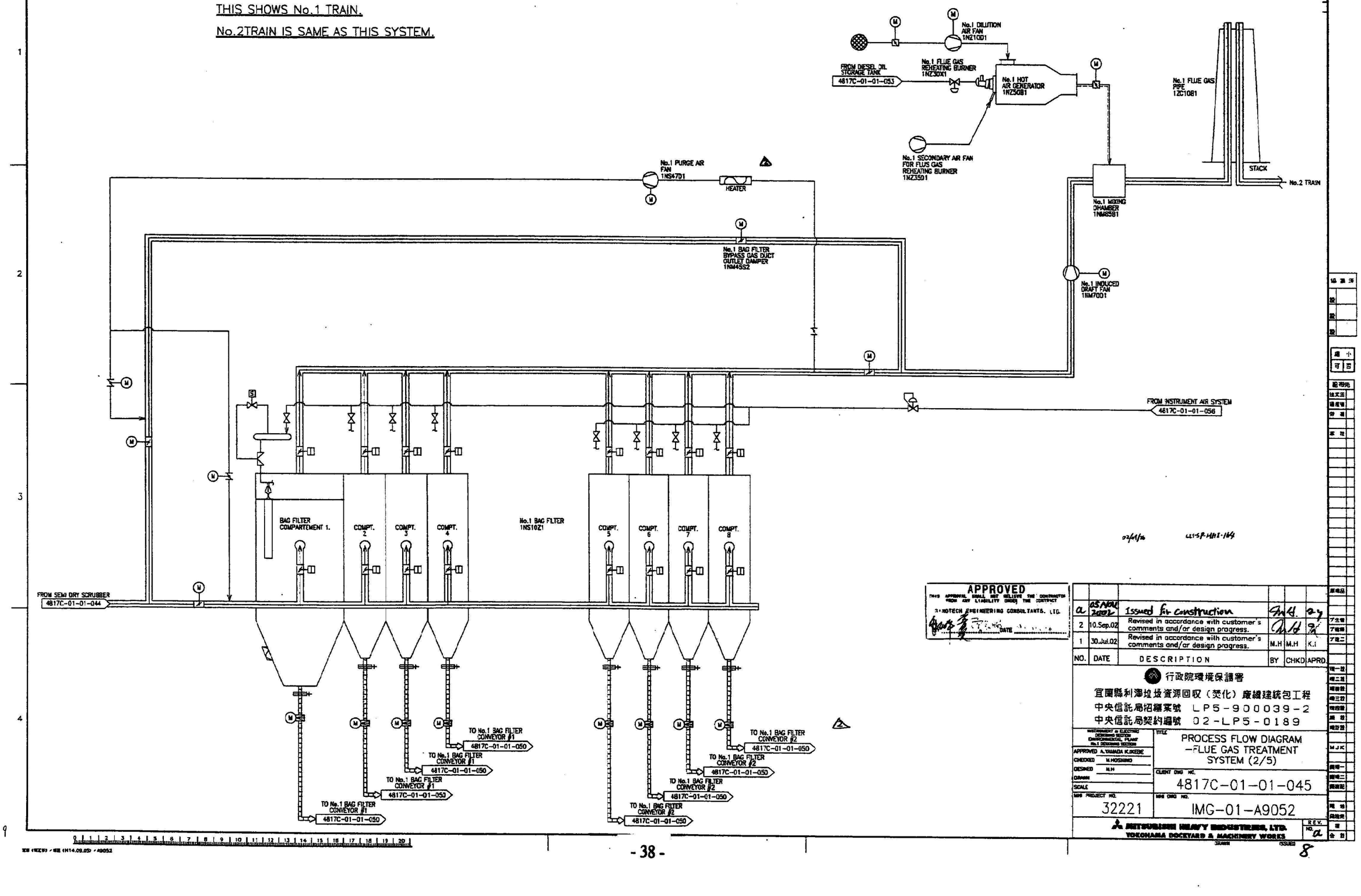
TITLE: PROCESS FLOW DIAGRAM —FLUE GAS TREATMENT SYSTEM (1/5)
CLIENT DWG NO. 4817C-01-01-044
MHI DWG NO. IMG-01-A9051
REV. NO. a

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	

THIS SHOWS No.1 TRAIN.

No.2TRAIN IS SAME AS THIS SYSTEM.



APPROVED

THIS APPROVAL SHALL NOT RELIEVE ANY CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT

SINOTECH ENGINEERING CONSULTANTS, LTD.

DATE

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	05 NOV 2002	Issued for Construction			
2	10.Sep.02	Revised in accordance with customer's comments and/or design progress.			
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠總建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

INSTRUMENT & ELECTRIC DESIGNING SECTION ENVIRONMENTAL PLANT No.1 DESIGNING SECTION	TITLE: PROCESS FLOW DIAGRAM —FLUE GAS TREATMENT SYSTEM (2/5)
APPROVED A.YAMADA K.IKEBE	
CHECKED M.HOSHINO	
DESIGNED M.H	CLIENT DWG NO. 4817C-01-01-045
DRAWN	
SCALE	
MHI PROJECT NO. 32221	MHI DWG NO. IMG-01-A9052

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

DRAWN ISSUED REV. NO. a

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	

FROM REVSE WATER ROOF TANK
4817C-01-01-055

FROM LIME FEEDER
4817C-01-01-047

VENT DUST SCRUBBER#1
NN37B1

LIME SLURRY TANK#1
NN31B1

AGITATOR#1
NN35D1

LIME SLURRY SUPPLY PUMP#1
NN51D1

LIME SLURRY SUPPLY PUMP#2
NN52D1

REUSE WATER
4817C-01-01-055

TO No.1 ROTARY ATOMIZER
4817C-01-01-044

TO No.2 ROTAR/ATOMIZER
4817C-01-01-044

FROM LIMEFEEDER
4817C-01-01-047

VENT DUST SCRUBBER#2
NN38B1

LIME SLURRY TANK#2
NN32B1

AGITATOR#2
NN36D1

LIME SLURRY SUPPLY PUMP#3
NN53D1

LIME SLURRY SUPPLY PUMP#4
NN54D1

LIME SLURRY BASIN PUMP #1 & #2
NN41D1,NN42D1

LIME SLURRY BASIN
NN40B1

09/11/02 LES-SP-1441-202

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	05 NOV. 2002	Issued for construction			
3	10.Oct.02	Revised in accordance with customer's comments.			
2	10.Sep.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程

中央信託局招標案號 LPS-900039-2

中央信託局契約編號 02-LPS-0189

APPROVED	A.TAMADA K.INEBE
CHECKED	M.HOSHINO
DESIGNED	M.H
DRAWN	
SCALE	
MHI PROJECT NO.	32221

TITLE: PROCESS FLOW DIAGRAM -FLUE GAS TREATMENT SYSTEM (3/5)

CLIENT DWG NO. 4817C-01-01-046

MHI DWG NO. IMG-01-A9053

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED

REV. NO. a

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	

VENT TO ATM

INSTRUMENT AIR
4817C-01-01-056

LIME SILO VENT FAN #1 NN07D1

LIME SILO VENT FAN #2 NN08D1

VENT FILTER #1 NN05B1

VENT FILTER #2 NN06B1

LIME SILO #1 NN11B1

LIME SILO #2 NN12B1

SCREW FEEDER FOR LIME SILO #1 NN25D1

SCREW FEEDER FOR LIME SLO #2 NN26D1

TO LIME SLURRY TANK #2
4817C-01-01-048

TO LIME SLURRY TANK #1
4817C-01-01-048

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE

02/08/26 LIS-SP-MME-164

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	05 Nov 2002	Issued for construction			
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.			

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠擴建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

INSTRUMENT & ELECTRIC DESIGNING SECTION ENVIRONMENTAL PLANT No.1 DESIGNING SECTION	TITLE: PROCESS FLOW DIAGRAM -FLUE GAS TREATMENT SYSTEM (4/5)
APPROVED A.YAMADA K.IKEBE	
CHECKED M.HOSHINO	
DESIGNED M.H	CLIENT DWG NO. 4817C-01-01-047
DRAWN	
SCALE	
MHI PROJECT NO. 32221	MHI DWG NO. IMG-01-A9054

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED REV. NO. a

10

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	

ACTIVATED CARBON

VENT TO ATM

A.C.SILO VENT FAN #1 NN67D1

A.C.SILO VENT FILTER #1 NN65D1

A.C.SILO VENT FAN #2 NN68D1

A.C.SILO VENT FILTER #2 NN66D1

ACTIVATED CARBON SILO #1 NN71B1

ACTIVATED CARBON SILO #2 NN72B1

N2 BOMBES

FROM INSTRULENT AIR HEADER

No.1 A.C. INJECTION BLOWR 1NN60D1

No.2 A.C. INJECTION BLOWR 2NN60D1

COMMON STANDSY A.C.INJECTION BLOWR NN60D1

No.1 TABLE FEEDER FOR ACTIVATED CARBON SILO

No.2 TABLE FEEDER FOR ACTIVATED CARBON SILO

4817C-01-01-044 A/C INJECTION NOZZLES

4817C-01-01-044 A/C INJECTION NOZZLES

02/09/16 155-SR-0911-164

APPROVED

SINOTECH ENGINEERING CONSULTANTS, LTD.

DATE

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	05 Nov 2002	Issued for construction			
2	10.Sep.02	Revised in accordance with customer's comments and/or design progress.			
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

APPROVED	A.YAMADA K.IKEBE
CHECKED	M.HOSHINO
DESIGNED	M.H
DRAWN	
SCALE	
MHI PROJECT NO.	32221

TITLE: PROCESS FROW DIAGRAM -FLUE GAS TREATMENT SYSTEM (5/5)

CLIENT DWG NO. 4817C-01-01-048

MHI DWG NO. IMG-01-A9055

REV. NO. a

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA BOILER & MACHINERY WORKS

ISSUED

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	

FROM CITY WATER DISTRIBUTER
4817C-01-01-052

FROM MAKE UP WATER TANK
4817C-01-01-052

HOIST
UQ31D1

AGITATOR
NV11D1

UREA STORAGE TANK #1
NV11B1

No.1 UREA TRANSFER PUMP #1 & #2
1NV21D1,1NV22D1

AGITATOR
1NV30D1

No.1 UREA SOLUTION TANK
1NV30B1

No.1

No.1 UREA SOLUTION INJECTION PUMP #1 & #2
1NV41D1,1NV42D1

No.1 INJECTION NOZZLES
1NV71Q1
1NV72Q1
1NV73Q1
1NV74Q1

No.2 INJECTION NOZZLES
2NV71Q1
2NV72Q1
2NV73Q1
2NV74Q1

4817C-01-01-056 SERVICE AIR

AGITATOR
NV12D1

UREA STORAGE TANK #2
NV12B1

No.2 UREA TRANSFER PUMP #1 & #2
2NV21D1,2NV22D1

AGITATOR
2NV30D1

No.2 UREA SOLUTION TANK
2NV30B1

No.1

No.2 UREA SOLUTION INJECTION PUMP #1 & #2
2NV41D1,2NV42D1

TO ASH DRAINAGE PIT

on 03/01/14 LES-SP-MHI-203

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
DATE

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	05 Nov. 2002	Issued for construction			
3	10.Oct.02	Revised in accordance with customer's comments.			
2	10.Sep.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

INSTRUMENT & ELECTRIC DESIGNING SECTION ENVIRONMENTAL PLANT No.1 DESIGNING SECTION	TITLE: PROCESS FLOW DIAGRAM —SNCR NOx REMOVAL SYSTEM
APPROVED A.YAMADA K.KEDE	
CHECKED M.HASHIMO	
DESIGNED M.H	CLIENT DWG NO. 4817C-01-01-049
DRAWN	
SCALE	
MHI PROJECT NO. 32221	MHI DWG NO. IMG-01-A9056

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED
REV. NO. a

12

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	

FROM No.1 BAG FILTER 4817C-01-01-045
FROM No.1 BAG FILTER 4817C-01-01-045
FROM No.1 BAG FILTER 4817C-01-01-045
FROM No.1 BAG FILTER 4817C-01-01-045
No.1 BAG FILTER CONVEYOR #1 1NS21D1

FROM No.1 BAG FILTER 4817C-01-01-045
FROM No.1 BAG FILTER 4817C-01-01-045
FROM No.1 BAG FILTER 4817C-01-01-045
FROM No.1 BAG FILTER 4817C-01-01-045
No.1 BAG FILTER CONVEYOR #2 1NS22D1

No.1 BAG FILTER FLY AHS CONVEYOR #1 1NY10D1

FROM No.1 SEMI-DRY SCRUBBER 4817C-01-01-044
No.1 SEMI DRY SCRUBBER CONVEYOR 1NP23D1
No.1 BAG FILTER FLY ASH CONVEYOR #2 1NY20D1

FROM No.1 BOILER FLY ASH CONVEYOR #2 4817C-01-01-040
FROM No.1 BOILER FLY ASH CONVEYOR #2 4817C-01-01-040
FROM No.1 BOILER FLY ASH CONVEYOR #1 4817C-01-01-040
FROM No.1 BOILER FLY ASH CONVEYOR #1 4817C-01-01-040

FLY ASH ASSEMBLY CONVEYOR #1-1 NY51D1
FLY ASH ASSEMBLY CONVEYOR #1-2 NY55D1

FROM No.2 SEMI-DRY SCRUBBER 4817C-01-01-044
No.2 SEMI DRY SCRUBBER CONVEYOR 2NP20D1

FROM No.2 BOILER FLY ASH CONVEYOR #2
FROM No.2 BOILER FLY ASH CONVEYOR #2
FROM No.2 BOILER FLY ASH CONVEYOR #1
FROM No.2 BOILER FLY ASH CONVEYOR #1

FLY ASH ASSEMBLY CONVEYOR #2-1 NY52D1
FLY ASH ASSEMBLY CONVEYOR #2-2 NY56D1

FROM No.1 BAG FILTER
FROM No.1 BAG FILTER
FROM No.1 BAG FILTER
FROM No.1 BAG FILTER
No.2 BAG FILTER CONVEYOR #1 2NS21D1

FROM No.1 BAG FILTER
FROM No.1 BAG FILTER
FROM No.1 BAG FILTER
FROM No.1 BAG FILTER
No.2 BAG FILTER CONVEYOR #2 2NS22D1

No.1 BAG FILTER FLY AHS CONVEYOR #1 2NY10D1

No.2 BAG FILTER FLY ASH CONVEYOR #2 2NY20D1

4817C-01-01-051 TO FLY ASH SILO

FLY ASH ELEVATION CONVEYOR #2 NY72D1

FLY ASH ELEVATION CONVEYOR #1 NY71D1

4817C-01-01-051 TO EMERGENCY CONVEYOR

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE 91.11.18

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	05 NOV. 2002	Issued for Construction	CWH		
3	10.Oct.02	Revised in accordance with customer's comments.			
2	10.Sep.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I

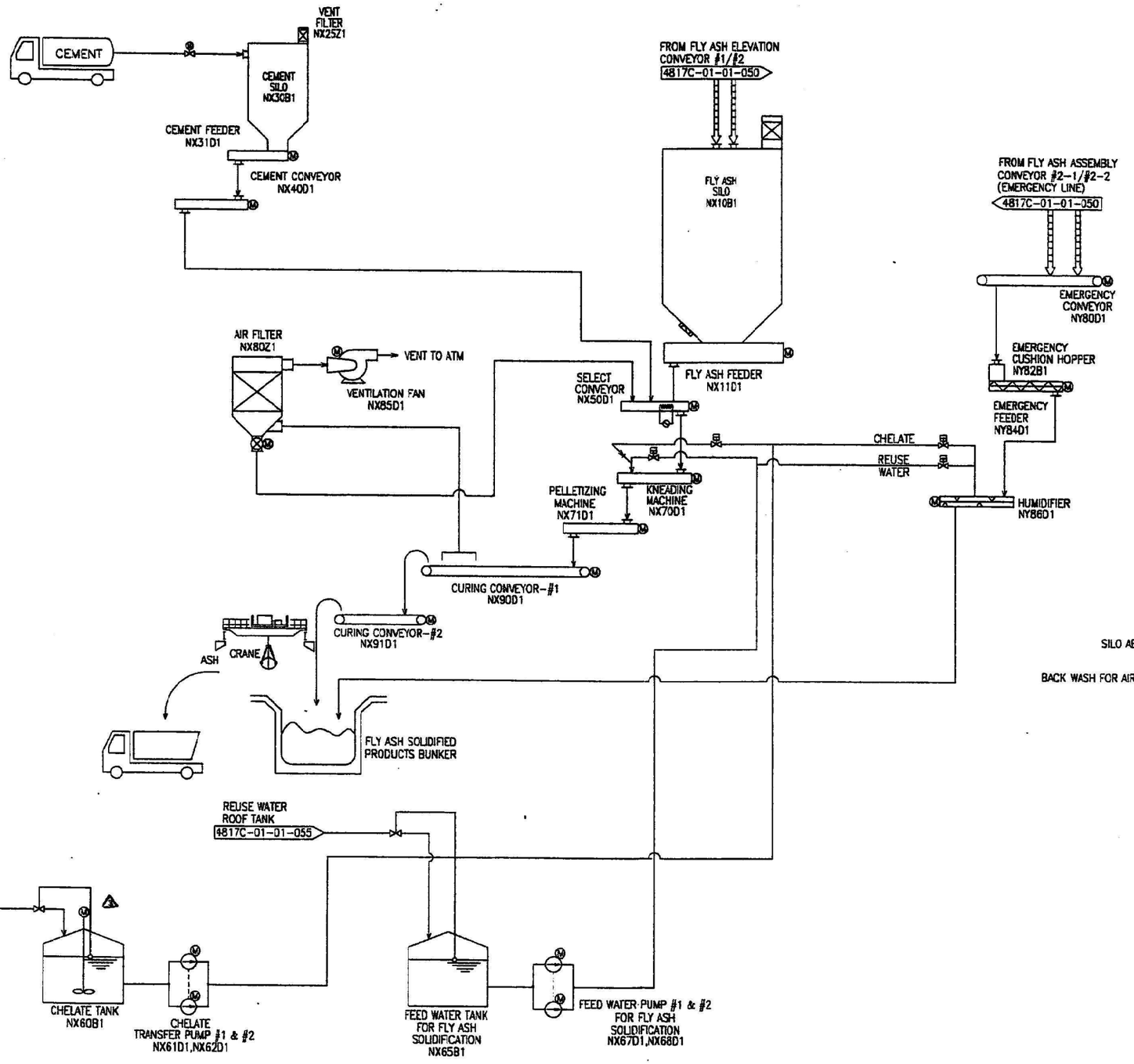
行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

APPROVED	A.YAMADA K.IKEDE
CHECKED	M.HOSHINO
DESIGNED	M.H
DRAWN	
SCALE	
M/H PROJECT NO.	32221

TITLE: PROCESS FLOW DIAGRAM —FLY ASH HANDLING SYSTEM
CLIENT DWG NO. 4817C-01-01-050
M/H DWG NO. IMG-01-A9377
REV. NO. a

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA BOILERS & MACHINERY WORKS
DRAWN ISSUED 13

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	



APPROVED

THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT

SINOTECS ENGINEERING CONSULTANTS, LTD.

DATE 91.11.8

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	05 NOV. 2002	Issued for construction			
3	10.Oct.02	Revised in accordance with customer's comments.			
2	10.Sep.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

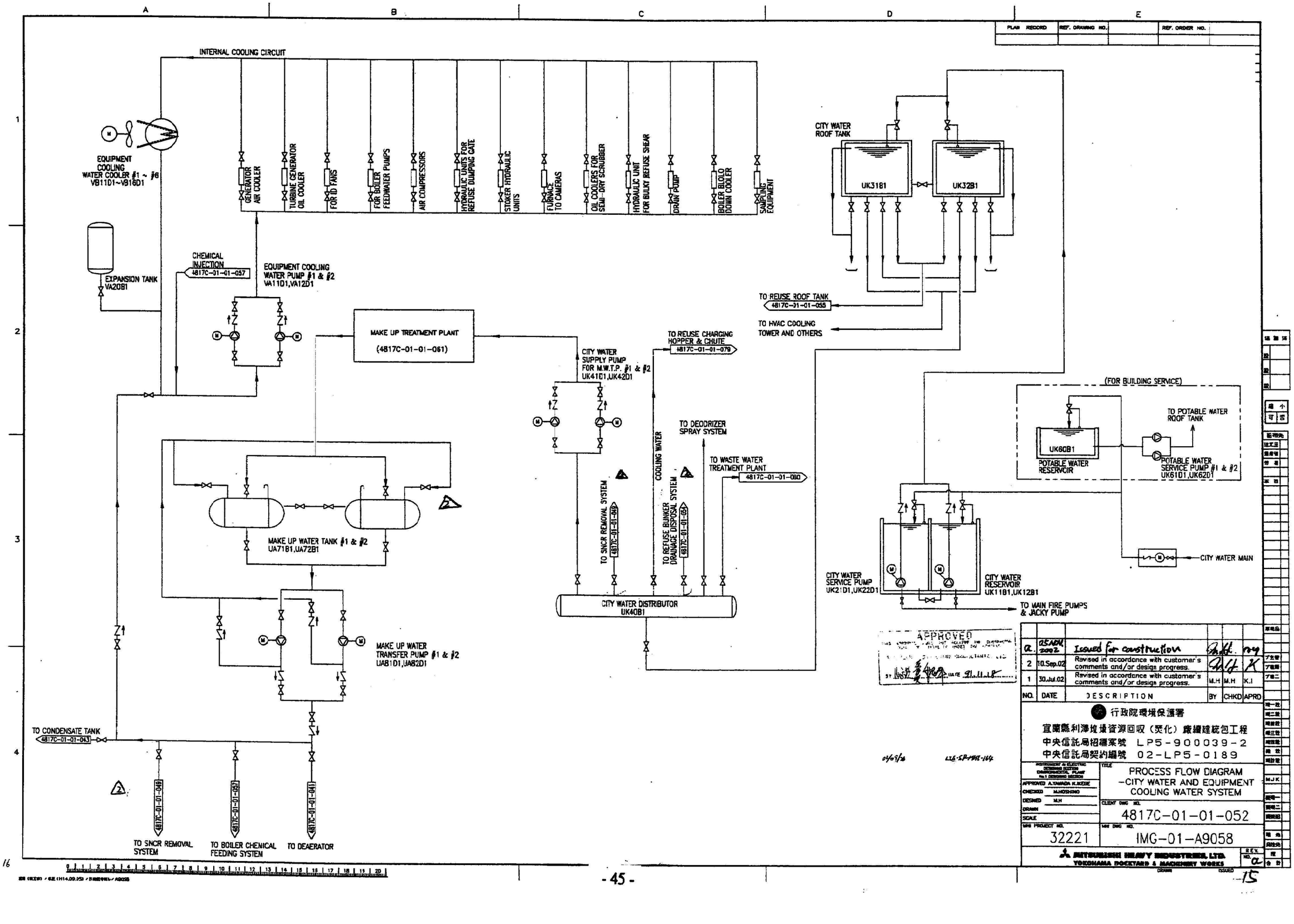
INSTRUMENT & ELECTRIC DESIGNING SECTION ENVIRONMENTAL PLANT No.1 DESIGNING SECTION	TITLE: PROCESS FLOW DIAGRAM -FLY ASH SOLIDIFICATION SYSTEM
APPROVED A.YAMADA K.IKEBE	
CHECKED M.HOSHINO	
DESIGNED M.H	CLIENT DWG NO. 4817C-01-01-051
DRAWN	
SCALE	
MHI PROJECT NO. 32221	MHI DWG NO. IMG-01-A9057

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

DRAWN ISSUED

REV. NO. a

14



PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.

APPROVED

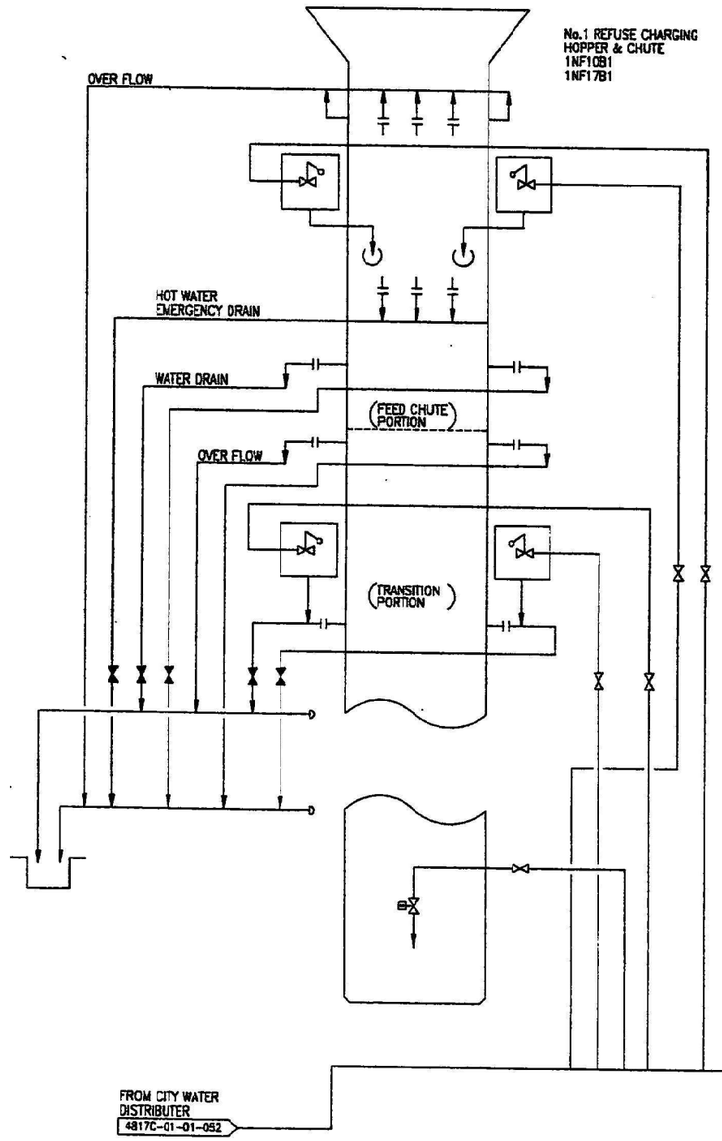
NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	25 NOV 2002	Issued for construction			
2	10.Sep.02	Revised in accordance with customer's comments and/or design progress.			
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I

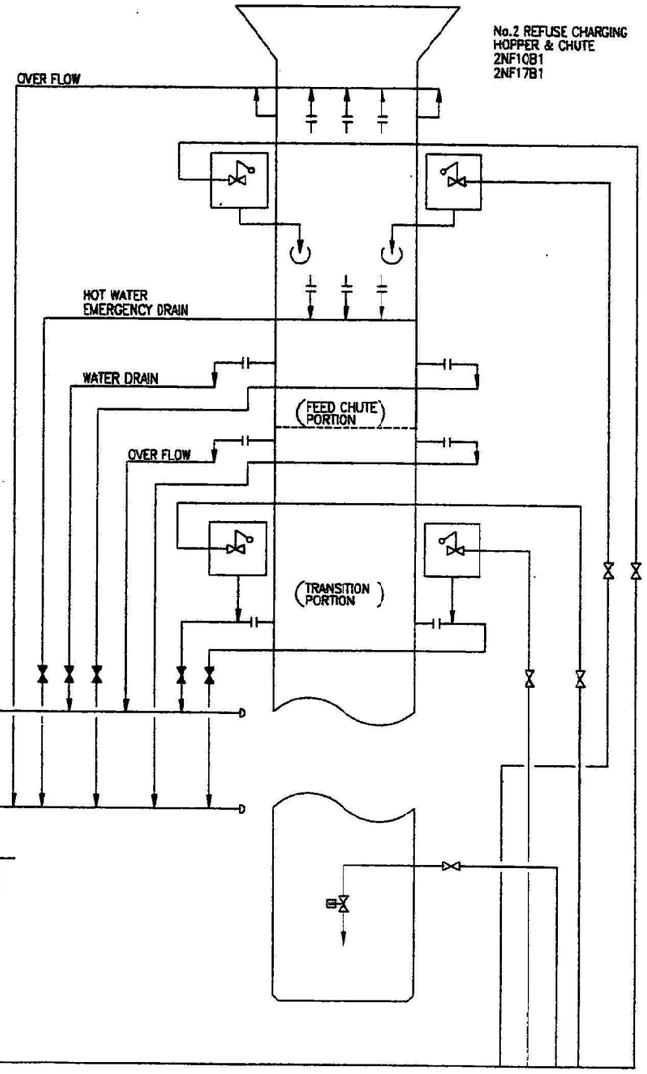
行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

INSTRUMENT & ELECTRIC DESIGNING SECTION ENVIRONMENTAL PLANT No.1 DESIGNING SECTION	
APPROVED	A.YAMADA K.IKEDE
CHECKED	M.HOSHINO
DESIGNED	M.H
DRAWN	
SCALE	
MHI PROJECT NO.	32221
TITLE	PROCESS FLOW DIAGRAM -CITY WATER AND EQUIPMENT COOLING WATER SYSTEM
CLIENT DWG NO.	4817C-01-01-052
MHI DWG NO.	IMG-01-A9058
REV. NO.	a

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA BOILER & MACHINERY WORKS

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	





02/09/26 LLS-SF-0991-B4

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
BY:KOTOBUKI ENGINEERING CONSULTANTS, LTD.
BY 李勇發 DATE 02.11.18

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
A	25 Nov. 2002	Issued for construction			
1	30 Jul. 02	Revised in accordance with customer's comments and/or design progress.			

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

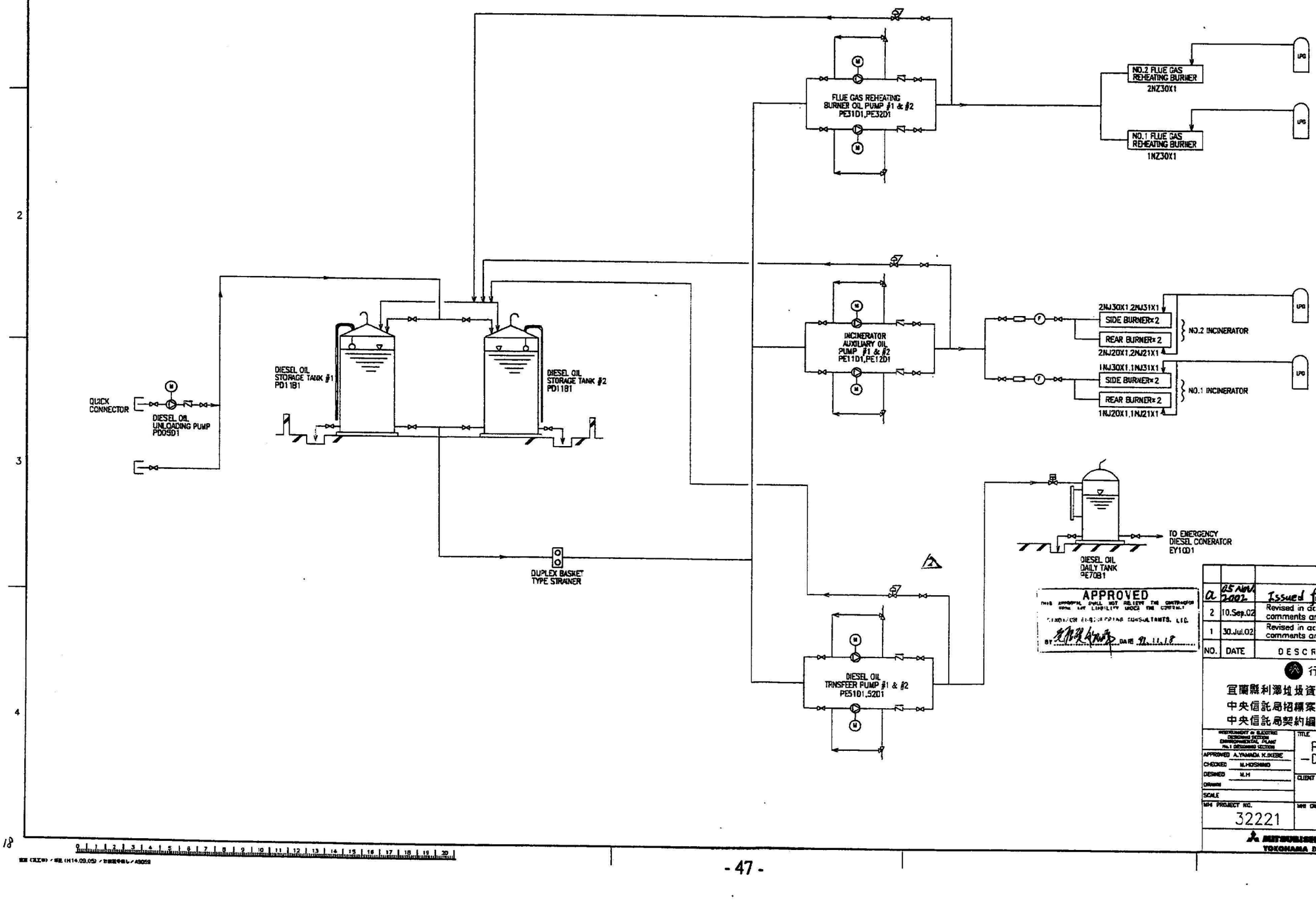
WASHOUGHT ELECTRIC OVERSEAS SECTION ENVIRONMENTAL PLANT No.1 DESIGNING SECTION	TITLE: PROCESS FLOW DIAGRAM -REFUSE CHARGING HOPPER & CHUTE COOLING SYSTEM
APPROVED A.YAMADA K.IKEBE	
CHECKED M.HOSHINO	
DESIGNED M.H	CLIENT DWG NO. 4817C-01-01-079
DRAWN	
SCALE	
MHI PROJECT NO. 32221	MHI DWG NO. IMG-01-A9378

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN CHECKED

REV. NO. A

16

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	



02/9/06 LES-SP-MME-164

DRAWING

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT.
TAIWAN ENGINEERING CONSULTANTS, LTD.
BY 吳明賢 DATE 91.11.18

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	25 NOV 2002	Issued for construction			
2	10.Sep.02	Revised in accordance with customer's comments and/or design progress.			
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

ENVIRONMENT & ELECTRIC DESIGNING SECTION ENVIRONMENTAL PLANT No.1 DESIGNING SECTION	TITLE: PROCESS FLOW DIAGRAM —DIESEL OIL SUPPLY SYSTEM
APPROVED A.YAMADA K.KOBE	
CHECKED M.HOSHINO	
DESIGNED M.H	CLIENT DWG NO. 4817C-01-01-053
DRAWN	
SCALE	
MHI PROJECT NO. 32221	MHI DWG NO. IMG-01-A9059

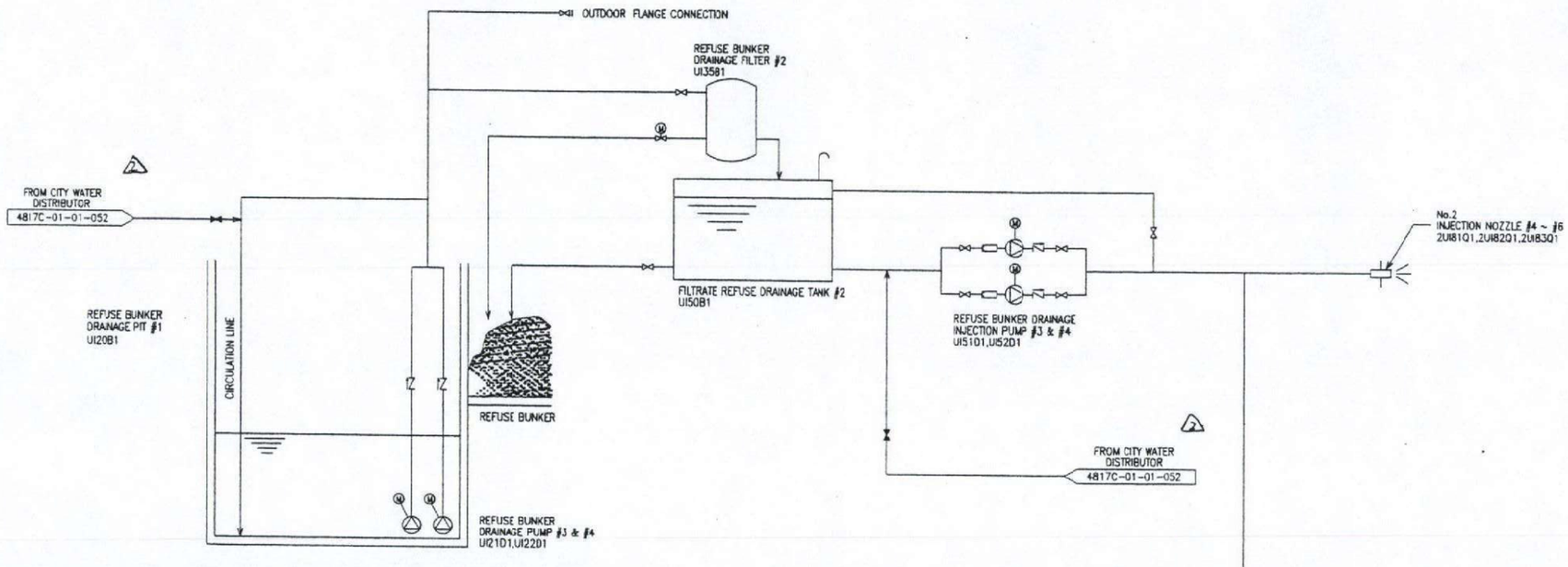
MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA SHIPYARD & MACHINERY WORKS

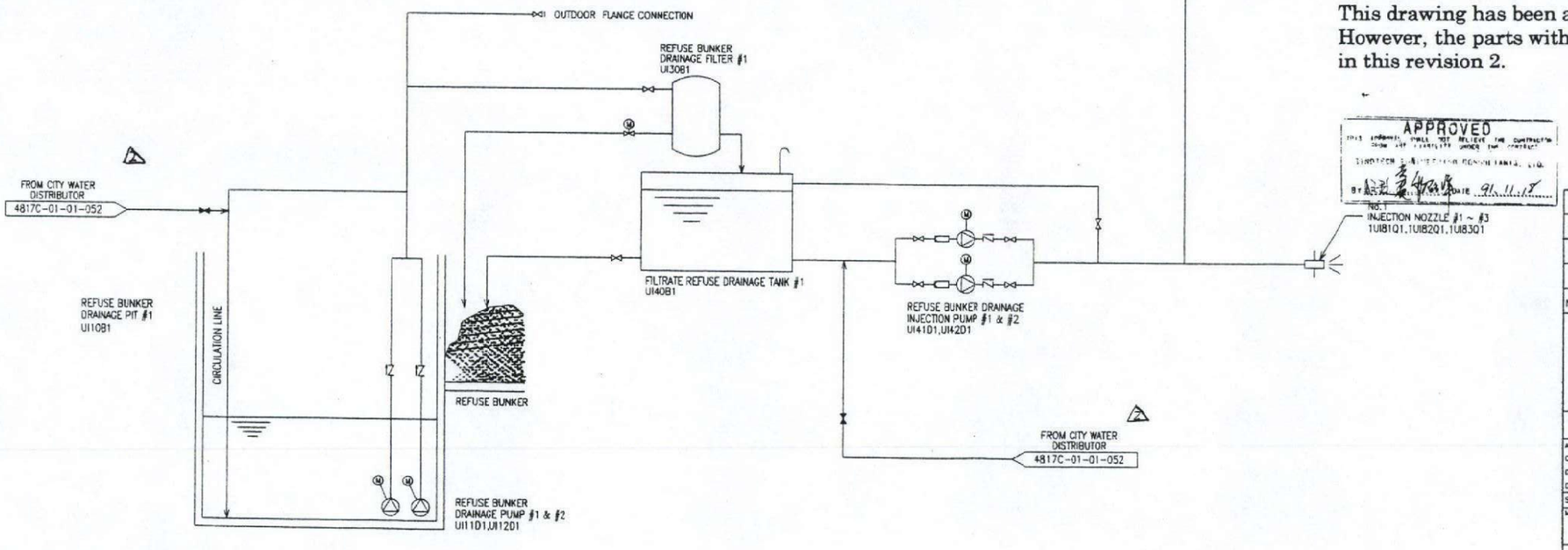
DESIGNED ISSUED REV. NO. a

117

47

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	





This drawing has been approved in the revision 1.
However, the parts with cloud mark have been revised in this revision 2.

APPROVED
DATE 91.11.13

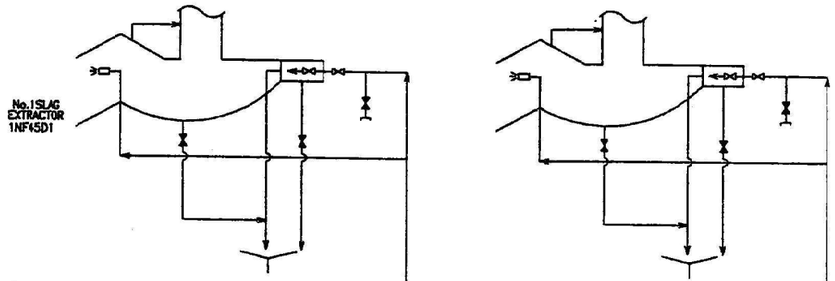
NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	05 Nov. 2002	Issued for construction			
2	10.Sep.02	The parts with clouds marks have been revised in this revision.			
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

INSTRUMENT & ELECTRIC DESIGNING SECTION ENVIRONMENTAL PLANT No.1 DESIGNING SECTION	TITLE: PROCESS FLOW DIAGRAM -REFUSE BUNKER DRAINAGE DISPOSAL SYSTEM
APPROVED A.YAMADA K.IKEBE	
CHECKED M.HOSHINO	
DESIGNED M.H	CLIENT DWG NO. 4817C-01-01-054
DRAWN	
SCALE	
MHI PROJECT NO. 32221	MHI DWG NO. IMG-01-A9060

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA BOILERYARD & MACHINERY WORKS
DRAWN ISSUED REV. NO. a

PLAN RECORD	REF. DRAWING NO.		REF ORDER NO.	



TO LIME SLURRY INJECTION LINE
4817C-01-01-046

TO LIME SLURRY INJECTION LINE
4817C-01-01-046

REUSE WATER SUPPLY PUMP FOR R/A #1 & #2
UU5181,UU5281

FROM CITY WATER ROOF TANK
4817C-01-01-052

REUSE WATER ROOF TANK #1
UU1181

REUSE WATER ROOF TANK #2
UU1281

OTHER USAGER IN THE PLANT BUILDINGS

REUSE WATER DISTRIBUTOR
UU4081

TO REFUSE DISCHARGING PLATFORM WASHING SYSTEM

TO FLY ASH SOLIDIFICATION EQUIPMENT
TO ASH LOADING PLATFORM WASHING SYSTEM

TO CAR WASHING SYSTEM
OTHER USAGES IN THE PLANT SITE

4817C-01-01-045
TO Ca(OH)2 SLURRY WETTING AND PREPARATION

TO FIRE FIGHTING GUNS

TO FIRE FIGHTING SYSTEM

REUSE WATER SUPPLY PUMP #1 & #2
WN91D1,WN92D1

REUSE WATER STORAGE TANK
WN5081

REUSE WATER
FROM WASTEWATER TREATMENT PLANT

02/07/26. LCS-SF-0005-B4

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY ... DATE ...

FIRE FIGHTING GUN #1 & #2
(REFUSE BUNKER)
UU21D1,UU22D1

FROM REUSE WATER ROOF TANK

FIRE FIGHTING BOOSTER PUMP #1 & #2
UU11D1,UU12D1

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	25 NOV. 2002	Issued for construction			
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.			

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

INSTRUMENT & ELECTRIC DESIGNING SECTION ENVIRONMENTAL PLANT No.1 DESIGNING SECTION

APPROVED A.YAMADA K.IKEBE
CHECKED M.HOSHINO
DESIGNED M.H
DRAWN
SCALE

TITLE: PROCESS FLOW DIAGRAM -REUSE WATER SUPPLY SYSTEM

CLIENT DWG NO. 4817C-01-01-055

MHI PROJECT NO. 32221

MHI DWG NO. IMG-01-A9061

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA SHIPYARD & MACHINERY WORKS

REV. NO. a

DRAWN ISSUED

19

49

PLAN RECORD	REF. DRAWING NO.		REF ORDER NO.	

PLANT SERVICE AIR NETWORKS

- PLAT FORM
- REFUSE BUNKER AREA
- ASH BUNKER
- FLY ASH SILO AREA
- WORK SHOP
- I. D FAN ROOM
- COMPRESSOR ROOM
- D/G ROOM
- HYDRATED LIME STORAGE ROOM

- BAG FILTER
- SEMI-DRY SCRUBBER AREA
- BOILER AREA
- INCINERATOR AREA
- CONDENSATE COOLING SYSTEM
- T/G ROOM
- ODOR PREVENTION FACILITY ROOM
- MAKE UP WATER PLANT
- WASTE WATER TREATMENT PLANT

07/9/26 US-R-0411-164

PLANT AIR COMPRESSOR US10D1

STAND-BY AIR COMPRESSOR UT11D1

INSTRUMENT AIR COMPRESSOR UT10D1

PLANT AIR RECEIVER US20B1

PLANT AIR FINE FILTER #1 & #2 US41Z1,US42Z1

FILTER

INSTRUMENT AIR DRYER #1 & #2 UT31D1,UT32D1

INSTRUMENT AIR FINE FILTER #1 & #2 UT41Z1,UT42Z1

FILTER

INSTRUMENT AIR RECEIVER UT50B1

INSTRUMENT AIR NETWORKS

2

There are no revised parts.
This revision has been issued for the confirmation of approval, since any comments including "approval" have not been given to the last revision.

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
KINOTECH ENGINEERING CONSULTANTS, LTD.
DATE

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	25 NOV. 2002	Issued for construction	M.H	M.H	K.I
2	10.Sep.02	No revised parts. Issued for confirmation of approval.	M.H	M.H	K.I
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

INSTRUMENT & ELECTRIC DESIGNING SECTION ENVIRONMENTAL PLANT No.1 DESIGNING SECTION

APPROVED	A.YAMADA K.IKEBE
CHECKED	M.HOSHINO
DESIGNED	M.H
DRAWN	
SCALE	

TITLE: PROCESS FLOW DIAGRAM -SERVICE AND INSTRUMENT AIR SYSTEM

CLIENT DWG NO.: 4817C-01-01-056

MHI PROJECT NO.: 32221

MHI DWG NO.: IMG-01-A9062

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA BOCKYARD & MACHINERY WORKS

REV. NO. a

DRAWN ISSUED

縮小 可 否

配布先

50

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	

FROM MAKE UP WATER TRANSFER PUMPS
4817C-01-01-052

AGITATOR UH20D1
Na_3PO_4 STORAGE TANK UH20B1

AGITATOR UH10D1
VOLATILE AMINE STORAGE TANK UH10B1

AGITATOR UH30D1
O_2SCAVENGER STORAGE TANK UH30B1

AGITATOR UH40D1
CONDITIONING AGENT STORAGE TANK UH40B1

TO CONDENSATE PUMPS
4817C-01-01-043

TO FEED WATER TANK
4817C-01-01-041

TO CONDENSATE PUMPS
4817C-01-01-043

0808-25-L0017-PC-5

TO NO.1 WASTE HEAT RECOVERY BOILER
4817C-01-01-041

TO NO.2 WASTE HEAT RECOVERY BOILER
4817C-01-01-041

TO FEED WATER TANK
4817C-01-01-041

TO EQUIP.C.W.PUMPS
4817C-01-01-052

Na_3PO_4 DOSING PUMP #1 ~ #3
UH21D1 ~ UH23D1

VOLATILE AMINE DOSING PUMP #1 ~ #4
UH11D1 ~ UH14D1

O_2SCAVENGER DOSING PUMP #1 ~ #4
UH31D1 ~ UH34D1

CONDITIONING AGENT DOSING PUMP #1 ~ #2
UH41D1 ~ UH42D1

APPROVED
BY [signature] DATE 91.11.18

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	15 AUG. 2002	Issued for construction			
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.			

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

INSTRUMENT & ELECTRIC DESIGNS SECTION ENVIRONMENTAL PLANT No.1 DESIGNING SECTION	TITLE: PROCESS FLOW DIAGRAN -CHEMICAL DOSING AND CONDITIONING SYSTEM
APPROVED A.YAMADA K.IKEDE	
CHECKED M.HOSHINO	
DESIGNED M.H	CLIENT DWG NO. 4817C-01-01-057
DRAWN	
SCALE	MHI PROJECT NO. 32221
	MHI DWG NO. IMG-01-A9063

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED REV NO. a

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	

REUSE WATER
4817C-01-01-055

RINSE TOWER #2 XF1401

WASH TOWER #2 XF1201

RINSE TOWER #1 XF1301

PHOTO CELL

WASH TOWER #1 XF1101

TRAFFIC LIGHT

No.1 SPRAY GUN

No.2 SPRAY GUN

SPRAY PUMP #1 XF7101

SPRAY PUMP #2 XF7201

SPRAY PUMP #3 XF7301

SPRAY PUMP #4 XF7401

WASH/RINSE HIGH PRESSURE PUMP #1 & #2 XP2101, XP2201

WASH/RINSE HIGH PRESSURE PUMP #3 & #4 XP2301, XP2401

WASH/RINSE WATER TANK XF2001

AGITATOR XF1001

DETERGENT TANK XF1091

DETERGENT METERING PUMP #1 & #2 XF1101, XF1201

DETERGENT METERING PUMP #3 & #4 XF1301, XF1401

02/01/28 LLS-SP-MM1-154

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY ... DATE 01.1.17

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
0	25 NOV. 2001	Issued for construction			
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.			

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

INSTRUMENT & ELECTRIC DESIGNING SECTION ENVIRONMENTAL PLANT No.1 DESIGNING SECTION

APPROVED	A.YAMADA K.IKEDA
CHECKED	M.HOSHINO
DESIGNED	M.M
DRAWN	
SCALE	
IHI PROJECT NO.	32221

TITLE: PROCESS FLOW DIAGRAM —VEHICLE WASHER SYSTEM

CLIENT DWG NO. 4817C-01-01-058

IHI DWG NO. IMG-01-A9064

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

REV NO. 0

DRAWN ISSUED

22

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	

FROM BF W PUMP OUTLET
4817C-01-01-040

FROM BF W PUMP OUTLET
4817C-01-01-040

FROM NO.2 BOILER STEAM DRUM
4817C-01-01-040

FROM NO.1 BOILER STEAM DRUM
4817C-01-01-040

FROM B.F.W. TANK
4817C-01-01-040

FROM NO.1 BOILER SAT'D STEAM
4817C-01-01-040

FROM NO.2 BOILER SAT'D STEAM
4817C-01-01-040

FROM NO.1 BOILER SUP'D STEAM
4817C-01-01-040

FROM NO.2 BOILER SUP'D STEAM
4817C-01-01-040

FROM CONDENSATE TANK
4817C-01-01-043

SAMPLING RACK RV10B1

FROM C.W. SUPPLY HEADER
4817C-01-01-052

TO C.W. RETURN HEADER
4817C-01-01-052

PACKAGE

02/09/16

APPROVED
MITSUBISHI HEAVY INDUSTRIES, LTD.
DATE 91.11.18

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
2	05 Nov. 2002	Issued For construction			
2	10.Sep.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I
1	30.Jul.02	Revised in accordance with customer's comments and/or design progress.	M.H	M.H	K.I

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

INSTRUMENT & ELECTRIC DESIGNING SECTION ENVIRONMENTAL PLANT No.1 DESIGNING SECTION	TITLE: PROCESS FLOW DIAGRAM -SAMPLING SYSTEM
APPROVED A.YAMADA K.IKEBE	
CHECKED M.HIDSHINO	
DESIGNED M.H	CLIENT DWG NO. 4817C-01-01-059
DRAWN	
SCALE	
MHI PROJECT NO. 32221	MPS DWG NO. IMG-01-A9065

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA BOILER & MACHINERY WORKS
DRAWN ISSUED
REV. NO. 2

53

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	

WWC
H2SO4
City Water
H2SO4 Storage Tank
H2SO4 Dosing Pump
Spare
To PH Adjustment Tank A1
Spare
To Neutralization Tank A

NaOH
NaOH Storage Tank
NaOH Dosing Pump
Spare
To PH Adjustment Tank A1
Spare
To Neutralization Tank B

Coagulant
Coagulant Storage Tank
Coagulant Dosing Pump
To Rapid Mixing Tank A

Coagulant Aid
City Water
Instrument Air
Coagulant Aid Storage Tank
Coagulant Aid Dosing Pump
To Flocculation Tank A

(Type I) WWA
Boiler Blowdown
Make-Up Water Treatment
Seepage From Slag Bunker
Laboratory Wastewater
Miscellaneous
To Refuse Bunker
City Water
Static Screen A
Oil Skimmer A
Odor
Air
Influent Chamber A
Equalization Tank A
Influent Wastewater Pump A
Coagulant
Liquid Chelating
H2SO4
NaOH
Coagulant Aid
pH Adjustment Tank A
Flocculation Tank A#1/2
Rapid Mixing Tank A
Primary Settling Tank A#1
Scum
Primary Settling Tank A#2
Waste Sludge Pump A
H2SO4
NaOH
Neutralization Tank A
To Fly Ash Solidification System

Liquid Chelating
City Water
Liquid Chelation Storage Tank
Liquid Chelating Solution Tank
Liquid Chelating Dosing Pump
To PH Adjustment Tank A1

NaOCL
City Water
NaOCL Storage Tank
NaOCL Dosing Pump
Spare
To Chlorination Contact Tank
Spare
To Sludge Mixing Tank

NOTE1:
Provide local control Panel for all motorized equipment.

(Type II) WWA
Personnel's Sanitary Wastewater
Platform Wastewater
Vehicle Washing Wastewater
Miscellaneous
To Refuse Bunker
Oil Skimmer B
Reuse Water
Odor
Air
Scum Skimmer B
Bar/ Fine Screen B
Influent Chamber B
Equalization Tank B
Influent Wastewater Pump B
Aeration Tank B
Distribution Tank
Return Sludge Pump B#1
Secondary Settling Tank B#1
Scum
Secondary Settling Tank B#2
Return Sludge Pump B#2
Pump Tank B
Sand Filter Feeding Pump B
To Equalizaion Tank B
Compressed Air
Sand Filter B#1
Sand Filter B#2
NaOCL
Chlorine Contact Tank
Reuse Water Storage Tank
Reuse Water Supply Pump
TO Reuse Water Roof Tank
Discharge To Manhole of Lihtser Industrial Park Sewer System

APPROVED
DATE 9.11.18

WWO
Equalization Tank A/B
Aeration Tank B
Secondary Settling Tank B#1/2
Return Sludge Tank
Sludge Mixing Tank
Sludge Thickener D#1/2
Sludge Holding Tank
Belt Filter
Exhaust Fan
To Refuse Bunker
Return Sludge Tank
Waste Sludge Pump D
NaOCl
Odor
Sludge Mixing Tank
Sludge Transfer Pump
WWD
Sludge Thickener D#1
Sludge Thickener D#2
Thickened Sludge Pump D#1
Thickened Sludge Pump D#2
Supernatant
To Equalization A
Sludge Holding Tank
Sludge Feeding Pump
Filtrate
Polymer
Instrument Air
City Water
Polymer Dosing Pump
Polymer Storage Tank
Belt Filter
Reuse Water
Compressed Air
Cake Conveyer
Cake Bunker

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
0	05.NOV 2002	Issued for construction.			

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.3 DESIGNING SECTION	TITLE: FLOW DIAGRAM WASTE WATER TREATMENT PLANT ODOR PREVENTION FACILITIES
APPROVED K. Fujita	CLIENT DWG NO. 4817C-01-01-060
CHECKED M. Okada	
DESIGNED T. Kagimoto	
DRAWN Y. Ogawa	
SCALE ~	MHI DWG NO. QWB-001-0149
MHI PROJECT NO. 32221	

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED
REV. NO. 0

PLAN RECORD	REF. DRAWING NO.		REF. ORDER NO.	

HCl

City Water

HCl Gas Scrubber

HCl Storage Tank

※1

NaOH

NaOH Storage Tank

※2

HCl Measuring Tank For Cation

NaOH Measuring Tank For Anion

HCl Measuring Tank For Mix-bed

NaOH Measuring Tank For Mix-bed

Make-up Water Tank

Degasifier Air Blower

Carbon Filter

Cation Exchanger

Degasifier

Anion Exchanger

Mixed-bed Exchanger

Back Wash Water Pump

Make-Up Water Transfer Pump

To deoerator

City Water

Degasifier Pump

Mix Blower

※2

※1

TO Wastewater Treatment Plant

Neutralization Tank

Wastewater Pump

Degasifier Air Blower

Carbon Filter

Cation Exchanger

Degasifier

Anion Exchanger

Mixed-bed Exchanger

Degasifier Pump

APPROVED

DATE 91.11.16

NOTE:

Y means collecting to Neutrolizolion Tank.

MAKE-UP WATER TREATMENT PLANT FLOW DIAGRAM

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	05.NOV. 2002	Issued for construction.	T.A	T.O	M.F

● 行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠擴建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.3 DESIGNING SECTION	TITLE: FLOW DIAGRAM MAKE-UP WATER TREATMENT PLANT
APPROVED K.Fujita	
CHECKED M.Maeda	
DESIGNED T.Kagawada	CLIENT DWG NO. 4717C-01-01-061
DRAWN Y.Ogawa	
SCALE ~	
MHI PROJECT NO. 32221	MHI DWG NO. QWB-001-0150

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

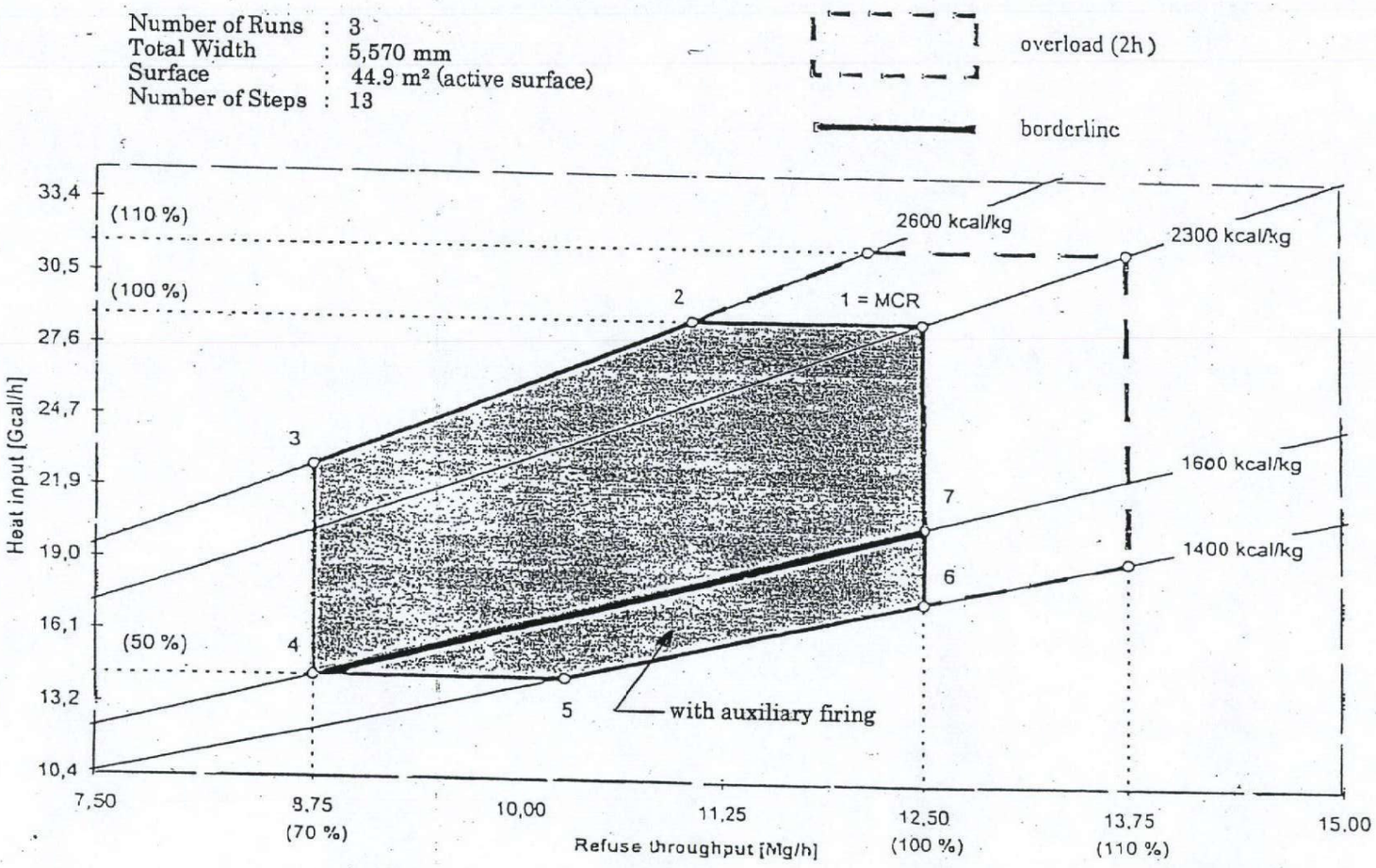
REV. NO. A

DRAWN ISSUED

Stoker Capacity Diagram

Lihtser

Number of Runs : 3
Total Width : 5,570 mm
Surface : 44.9 m² (active surface)
Number of Steps : 13



4817C-03-03-034

This drawing was approved by the Engineer on 12.4.2 per Letter IIS-9-MKT-196

FOR CONSTRUCTION

VALVE SYMBOLS

- GATE VALVE
- GATE VALVE (NORMALLY CLOSED)
- NEEDLE VALVE
- DIAPHRAGM VALVE
- GLOBE VALVE
- BALL VALVE
- Y-TYPE BLOWDOWN VALVE
- BUTTERFLY VALVE
- BUTTERFLY VALVE (NORMALLY CLOSED)
- WATER SEAL VALVE
- ANGLE VALVE
- FOOT VALVE
- POWER-ASSISTED NONRETURN VALVE
- SOLENOID VALVE
- THREE WAY VALVE
- THREE WAY CONTROL VALVE
- PRESS-REDUCING REGULATOR SELF-CONTAINED
- SAFETY RELIEF VALVE
- PRESSURE-REDUCING VALVE
- PRESSURE-REDUCING VALVE
- PRESSURE-REDUCING VALVE
- CHECK VALVE
- MOTOR OPERATED VALVE
- PISTON VALVE
- PNEUMATIC CONTROL VALVE
- AUTOMATIC RECIRCULATION VALVE
- KNIFE GATE VALVE (SOLID GATE VALVE)
- FLOAT BALL VALVE
- GOVERNOR VALVE
- EXERGENCY STOP VALVE
- DAMPER

MISCELLANEOUS DEVICES

- SILENCER
- VENT
- RAPTURE DISC
- STEAM TRAP
- EXPANSION JOINT
- DUPLEX BASKET TYPE STRAINER
- DRAIN POT
- POSITIVE DISPLACEMENT FLOWMETER
- ELECTROMAGNETIC FLOWMETER
- AREA FLOWMETER
- TURBINE FLOWMETER
- SIGHT GLASS
- ORIFICE
- Y-TYPE STARAINER
- BUCKET-TYPE STARAINER
- QUICK CONNECTOR
- DRAIN FUNNEL
- FLEXIBLE HOSE
- LINE CLASS OR SYSTEM CHANGE
- WELD CAP
- END CAP
- BLIND FLANGE
- REMOVABLE PIECE SPOOL
- BLIND PLATE (NORMALLY OPEN)
- REDUCER
- FLANGE JOINT
- DE-SH
- DIAPHRAGM ELEMENT
- FRAME ARRESTER
- ELECTRO-HYDRAULIC ACTUATOR
- PUMP
- FAN/BLOWER
- QRB-XXX-XXXX / QRB-XXX-XXXX CONTINUITY ARROW

LINE NOMENCLATURE

1) PIPING LINE NO.

1 RA 1 - 250 - CA1 - H 50

- T-HICKNESS
- INSULATION
- PIPING CLASS
- SIZE
- LINE NO.
- FLUID IDENTIFICATION
- SERIES IDENTIFICATION

2) PIPING LINE EQUIPMENT & INSTRUMENT

1 RA 1 S 2

- SERIAL NO.
- PARTS SYMBOL
- LINE NO.
- FLUID IDENTIFICATION
- SERIES IDENTIFICATION

3) PIPING CLASS

A C 1

- SERIAL NO.
- MATERIAL CODE
- RATING CODE

SERIES IDENTIFICATION

(Blank) COMMON PIPE LINE
1 #1 SERIES PIPE LINE
2 #2 SERIES PIPE LINE

PARTS SYMBOL

S VALVE
N LINE EQUIPMENT
P PRESSURE
T TEMPERATURE
L LEVEL
F FLUID
V VIBRATION
W WEIGHT
Z POSITION

INSULATION

H THERMAL INSULATION
C ANTI SWEATING INSULATION
P PERSONAL PROTECTION

RATING CODE

A 150lb
B 300lb
C 600lb
D 900lb
H HYDRAULIC LINE

MATERIAL CODE

C CARBON STEEL
A ALLOY STEEL
S STAINLESS STEEL
P PLASTIC

INSTRUMENT SYMBOLS

- LOCALLY MOUNTED
- LOCAL CONTROL PANEL
- MOUNTED ON DCS OR OTHER PC.
- TRANSMITTER
- SENSING POINT
- INSTRUMENT SIGNAL

INSTRUMENT IDENTIFICATION

VARIABLES \ INSTRUMENT FUNCTION	ALARM	CONTROLLER	CONTROL VALVE	DIFFERENTIAL	PRIMARY ELEMENT	GAGE	INDICATION	TOTALIZER	RECORDER	SWITCH	TRANSMITTER	OTHER
	A	C	CV	D	E	G	I	Q	R	S	T	Y
ANALYSIS	A	AC	–	–	AE	–	AI	–	AR	AS	AT	AY
CONDUCTIVITY	C						CI		CR		CT	
FLOW	F	FA	FC	FCV	–	FE	–	FI	FQ	FR	FS	FT	FY
HAND	H									HS			
CURRENT	I	IA	IC					II		IR	IS	IT	
TIME	K		KC					KI				KT	
LEVEL	L	LA	LC	LV	–	–	LG	LI	–	LR	LS	LT	LY
PRESSURE	P	PA	PC	PCV	PD	–	–	PI	–	PR	PS	PT	PY
TEMPERATURE	T	TA	TC	TCV	–	TE	–	TI	–	TR	TS	TT	TY
VIBRATION	V	VA						VI					
WEIGHT	W		WC					WI	WQ				
SPEED	Y	YA	YC		YD			YI			YY	YT	YY
POSITION	Z		ZC					ZI					
OTHER	–	–	–	–	–	–	–	–	–	–	–	–	–
REMARK	ADD SUFFIX LETTERS H L OR LL TO SWITCHES AND ALARMS TO INDICATE HIGH, LOW, HIGH HIGH OR LOW LOW												

NOTE:
GPA : GRAPHIC PANEL ANNUNCIATOR
GPR : GRAPHIC PANEL RECORDER

PEN RECORDER LIST

	TAG NO	DESCRIPTION	QTY
①	1KM10P5	NO.1 FURNACE GAS PRESS.	1
	1KM10T5	NO.1 FURNACE GAS TEMP.	
②	1KM16T5	NO.1 EVA OUTLET FLUE GAS TEMP.	1
	1KM20T5	NO.1 ECO. INLET FLUE GAS TEMP.	
	1KR10T5	NO.1 SCRUBBER INLET FLUE GAS TEMP.	
③	1KS10T5	NO.1 BAG FILTER INLET FLUE GAS TEMP.	1
	1KS10P5	NO.1 BAG FILTER DIFF PRESS.	
	1KM80T5	NO.1 STACK INLET FLUE GAS TEMP.	
④	1KM80P5	NO.1 STACK INLET FLUE GAS PRESS.	1
	1KM80F5	NO.1 STACK INLET FLUE GAS FLOW	
	1KR10A1	NO.1 BOILER OUTLET FLUE GAS CO	
	1KR10A2	NO.1 BOILER OUTLET FLUE GAS H2O	
⑤	1KR10A3	NO.1 BOILER OUTLET FLUE GAS HCl	1
	1KR10A4	NO.1 BOILER OUTLET FLUE GAS NH3	
	1KR10A5	NO.1 BOILER OUTLET FLUE GAS NOx	
	1KR10A6	NO.1 BOILER OUTLET FLUE GAS O2	
⑥	1KR10A7	NO.1 BOILER OUTLET FLUE GAS SOx	1
	1KM80A8	NO.1 STACK INLET FLUE GAS OPACITY	
	1KM80A1	NO.1 STACK INLET FLUE GAS CO	
	1KM80A2	NO.1 STACK INLET FLUE GAS H2O	
⑦	1KM80A3	NO.1 STACK INLET FLUE GAS HCl	1
	1KM80A4	NO.1 STACK INLET FLUE GAS NH3	
	1KM80A5	NO.1 STACK INLET FLUE GAS NOx	
⑧	1KM80A6	NO.1 STACK INLET FLUE GAS O2	1
	1KM80A7	NO.1 STACK INLET FLUE GAS SOx	
		SUPERVISORY PANEL FOR NO.1 TOTAL	8

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY ... DATE 92.04.17

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	17 APR '92	Issed as approved drawing	K.M	H.I	
2	13 FEB '92	Revised on customer's coments etc.	K.M	H.I	S.F
1	24 DEC '92	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION

APPROVED K.NISHIKAWA
CHECKED H.ICHITANI
DESIGNED K.MURANAKA
DRAWN K.M
SCALE

TITLE: P&I DIAGRAM SYMBOL LIST

CLIENT DWG NO. 4817C-01-01-121
MHI PROJECT NO. 32221
MHI DWG NO. QRB-003-7184
REV. NO. 1

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED

1 / 5

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	24.DEC.'02	Revised on comments.	K.W	TJ	Y.T
2	13.FEB.'03	Revised on comments.	K.W	TJ	Y.T
3	22.MAY.'03	Revised on comments.	K.W	TJ	Y.T

WEIGHING BRIDGE
WEIGH BRIDGE (x4)
BULKY-REFUSE SHEAR NK1001
FAULT COMMON
AUTO MODE
COMMON ALARM
SHEAR RELEASE
EM STOP
EM STOP
※c. THIS IS LOCATED AT CRANE CONTROL ROOM. AND ALSO AT RECEPTION HALL.
REFUSE HOPPER AND CHUTE 1NF17B1
REFUSE FEEDER
REFUSE-FEEDER
※d. THIS INSTRUMENT IS LOCATED AT CRANE CONTROL ROOM.
No.1 STOKER HYDRAULIC UNIT 1NF05B1
TO FEEDER,STOKER, ASH EXTRACTOR
No.1 STOKER GREASING UNIT 1NF07D1
TO ROTAYPARTS OF STOKER,ETC
FAN FOR EXCLUSIVE USE OF DEODORIZING XA11D1
AIR FILTER XA20Z1
ACTIVATED CARBON ADSORPTION DEODORIZING TOWER XA30B1
OUTDOOR
OIL RESERVER
PUMP UNIT
HYDRAULIC UNIT FOR BULKY REFUSE SHEAR NK05B1
STORAGE TANK FROM DIESEL OIL
SEE DWG.No.ORB-003-8524
FLUE GAS REHEATING SYSTEM
SEE DWG. No.ORB-003-8525
No.1 HOT AIR GENERATOR 1NZ50B1
No.1 DILUTION AIR FAN 1MZ1001
No.1 FLUE GAS DUCT 2C1081
No.1 SECONDARY AIR FAN FOR FLUE GAS REHEATING BURNER 1NZ35D1
1NZ7081
1NA82B1
No.1 MIXING CHAMBER 1NM85B1
1NM90B1
STACK
No.2 TRAIN
ORB-368-7375
No.1 INDUCED DRAFT FAN 1NM70D1
1NM45B1
PURGE AIR FAN TRIP
I.D.F TRIP
No.1 BAG FILTER BYPASS GAS DUCT OUTLET DAMPER 1NM45S2
PURGE AIR FAN
1NM50B1
O2
OPACITY
CO
NH3
H2O
HCl
SOx
NOx
TO DISPLAY BOARD AT ADMI. BUILDING AND MAIN ENTRANCE GATE
TO HCl CONCENTRATION DR. ORB-003-8517
TO HCl CONCENTRATION DR. ORB-003-8517
FAN FOR EXCLUSIVE USE OF DEODORIZING
No.1PRIMARY AIR FAN
No.2PRIMARY AIR FAN
Z00S01
OVERSIDE
DEODORIZER SPRAY SYSTEM
SEE DWG.No.ORB-003-7228
SPRAY NOZZLE (3x10)
REFUSE CRANE (x2) PA1Z01 PA2Z01
PRIMARY AIR FAN TRIP
1ND0S51
※1 1ND0S51
No.1 ECONOMIZER 1NK80B1
1NM30B1
SEMI-DRY SCRUBBER
SEE DWG. No.ORB-003-6518
BRIDGE BREAKER
※3
※2B
※2A
※2D
※2C
SIDE BURNER 1NJ30X1 1NJ31X1
REAR BURNER 1NJ20X1 1NJ21X1
DIESEL OIL
FURNACE
No.1 BOILER FLY ASH CONVEYOR #1 1NP10D1
RECEPTION HALL
REFUSE PIT
REFUSE DUMPING GATE (x9)
※a. THIS INSTRUMENT IS LOCATED AT CRANE CONTROL ROOM.
※b. EACH DUMPING GATE IS EQUIPED WITH SAME INSTRUMENTS.
TO SCOT BLOWER SEAL AIR SYSTEM
SEE DWG.No.ORB-003-6514
STOKER
ORIFICE DAMPER
No.1,2 RUN
No.3 RUN
TO EACH CONNECTING LOD
SLAG EXTRACTOR 1NF45D1
SLAG VIBRATING CONVEYOR 1NQ10D1
No.1 BURNER FAN 1NJ10D1
TO SIDE BURNER
TO REAR BURNER
1ND72S1
1ND74S1
※2A
※2B
※2C
※2D
1NF31S11
1NF31S12
STOKER SEALING FAN 1NF91D1 1NF52D1
TO ACC
*1 FROM REFUSE PIT
1ND55B1
1ND6QS1
1ND7QB1
No.1 SECONDARY AIR FAN 1ND80D1
No.1 PRIMARY AIR FAN 1ND10D1
1ND05B1
1ND15B1
STEAM AND CONDESATE SYSTEM SEE DWG.No.ORB-003-8511
TURBINE 2ND BLEED
TURBINE 1ST BLEED
1ST STAGE
2ND STAGE
No.1 STEAM AIR PREHEATER 1NE1CB1
No.1 BOILER FLY ASH CONVEYOR #2 1NP11D1
No.1 FLY ASH COMMON CONVEYOR #1 NY51D1
No.2 FLY ASH COMMON CONVEYOR NY35D1
No.1 FLY ASH COMMON CONVEYOR #2 NY52D1
(NOTE:This conveyer is not in No.2.)
No.1 FLY ASH ELEVATION CONVEYOR NY71D1
TO FLY ASH SILO SEE DWG.No.ORB-621-8298
FROM No.2 BOILER
ASH CRANE (x2) UN10D1 UN12D1
CHELATE
REUSE WATER
HUMIDIFIER NY86D1
EMERGENCY CUSHION HOPPER NY82B1
EMERGENCY FEEDER NY34D1
EMERGENCY CONVEYOR NY80D1
WASTE WATER COLLECTION SYSTEM SEE DWG.No.ORB-003-7154
ASH BUNKER
STAND-BY BELT CONVEYOR NO50D1
COMMON START/STOP
No.1 BAG FILTER CONVEYOR #1 1NS21D1
No.1 BAG FILTER CONVEYOR #2 1NS22D1
No.1 BAG FILTER FLY ASH CONVEYOR #1 1NY10D1
No.1 BAG FILTER FLY ASH CONVEYOR #2 1NY20D1
BAG FILTER SEE DWG.No. ORB-368-7375
BEARING
No.1 INDUCED DRAFT FAN 1NM70D1
BEARING
FLUID COUPLING
(REVOLUTION)
DRUM LEVEL LL TO TRIP I.D.F
BAG FILTER IN.ET TEMP.HH TO TRIP I.D.F
A.C. INJECTION NOZZLE
FROM ACTIVATED CARBON
TO ACC
No.1 SEMI DRY SCRUBBER CONVEYOR 1NP20D1
TO BEARING OF INDUCED DRAFT FAN
No.1 INDUCED DRAFT FAN BEARING LUBLICATION UNIT 1NM75D1
INTERLOCK TO
STOKER SYSTEM
A.C.INJECTION SYSTEM
PRIMARY AIR FAN
SNCR SYSTEM
LIME SLURRY SYSTEM
BURNER SYSTEM
REFUSE WATER INJECTION SYSTEM
FLUE GAS REHEATING SYSTEM
COMBUSTION CONTROL CAUTION
INTERLOCK CANCEL CAUTION
REFUSE FEEDER TROUBLE
STOKER TROUBLE
CLINKER ROLLER TROUBLE
ASH CONVEYOR TROUBLE
SLITING CHUTE TROUBLE
LUBRICATION OIL UNIT TROUBLE
STOKER HYDRAULIC UNIT TROUBLE

1. (INSTRUCTIONS)

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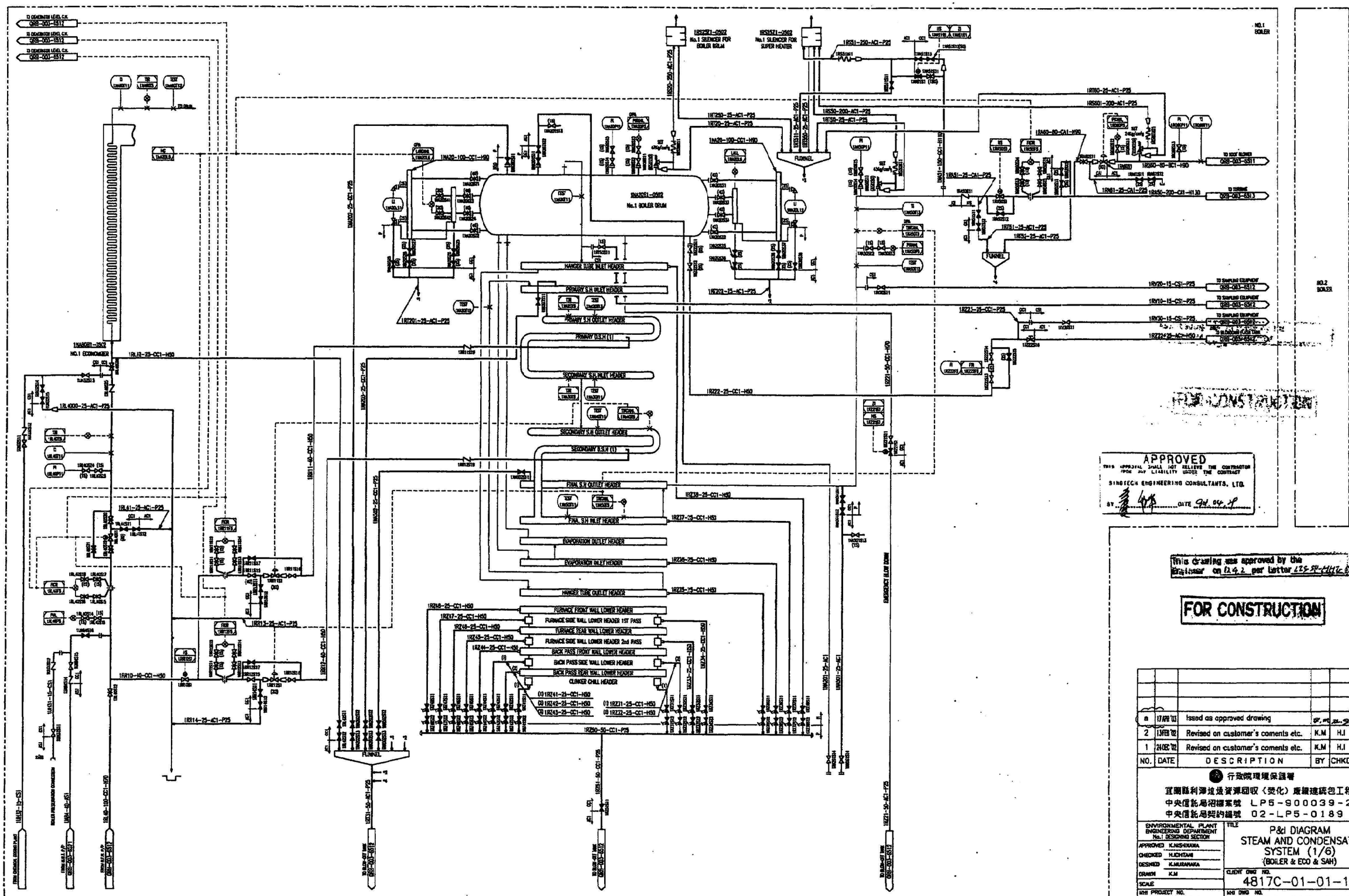
2. Confidential and Proprietary Information

行政院環境保護署
宜蘭縣利澤垃圾資源回收(焚化)廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT EQUIPMENT DESIGNING SECTION	
APPROVED	K.Nishikawa
CHECKED	T.Imamoto Y.Terashima
DESIGNED	K.Wada
DRAWN	K.Wada
SCALE	NON
MHI PROJECT NO.	32221

TITLE: DUCT & INSTRUMENT DIAGRAM
CLIENT DWG NO. 4817C-01-01-122
MHI DWG NO. QRB-003-7186
REV. NO. 3
MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA BOILERS & MACHINERY WORKS
DRAWN ISSUED



NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	17APR'03	Issued as approved drawing			
2	13FEB'02	Revised on customer's coments etc.	K.M	H.I	S.F
1	24DEC'02	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION

APPROVED	K.NISHIKAWA
CHECKED	H.ICHITANI
DESIGNED	K.MURANAKA
DRAWN	K.M
SCALE	
MHI PROJECT NO.	32221

TITLE: P&I DIAGRAM STEAM AND CONDENSATE SYSTEM (1/6) (BOILER & ECO & SAH)

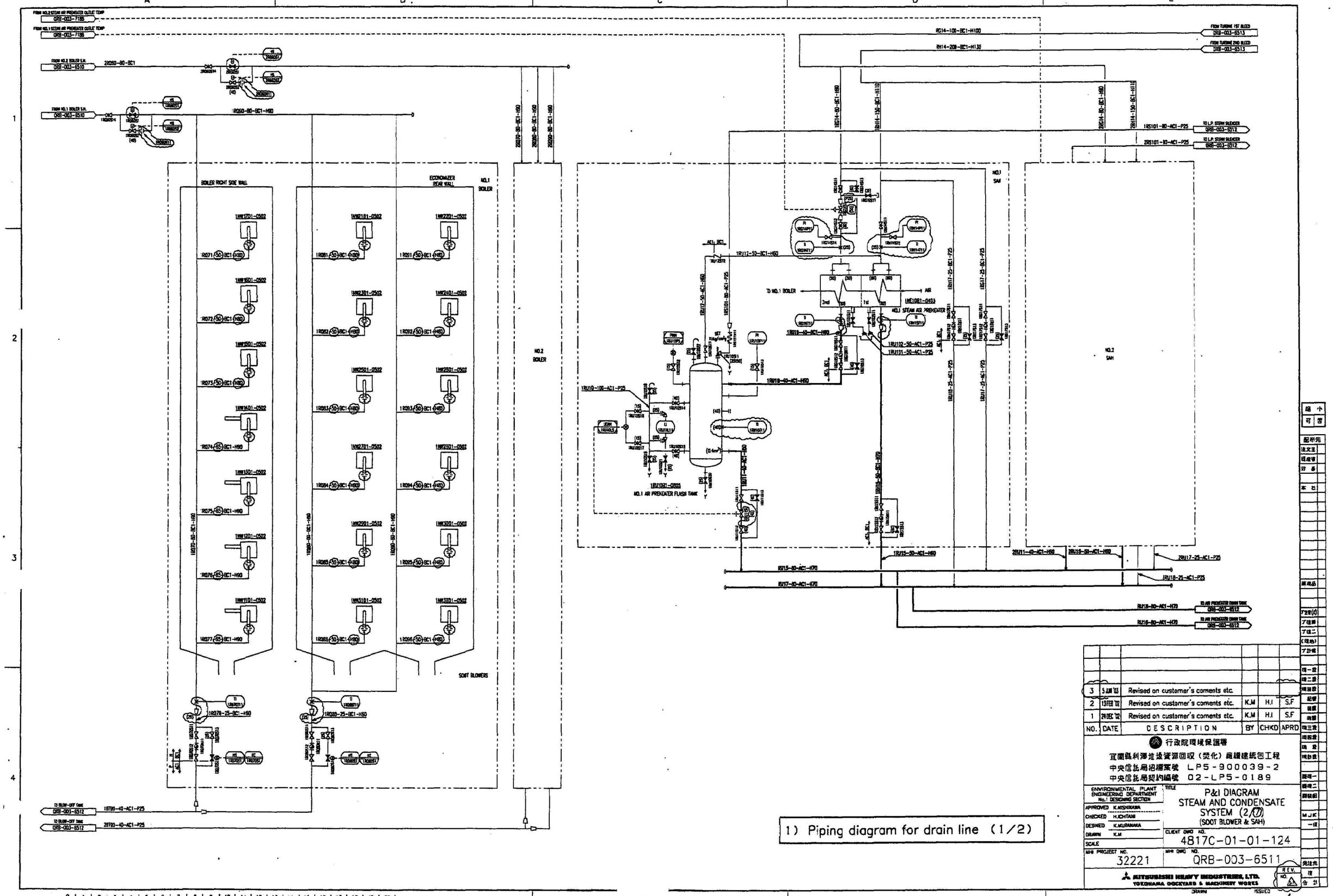
CLIENT DWG NO. 4817C-01-01-123

MHI DWG NO. QRB-003-6510

REV. NO. 3

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

DRAWN ISSUED



NO.	DATE	DESCRIPTION	BY	CHKD	APRD
3	5 JAN '03	Revised on customer's coments etc.			
2	13 FEB '02	Revised on customer's coments etc.	K.M	H.I	S.F
1	24 DEC '02	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程

中央信託局招標案號 LPS-900039-2

中央信託局契約編號 02-LPS-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION

APPROVED K.NISHIKAWA
CHECKED H.ICHITANI
DESIGNED K.MURAMAKA
DRAWN K.M
SCALE

TITLE: P&I DIAGRAM STEAM AND CONDENSATE SYSTEM (2/10) (SOOT BLOWER & SAH)

MHI PROJECT NO. 32221

CLIENT DWG NO. 4817C-01-01-124

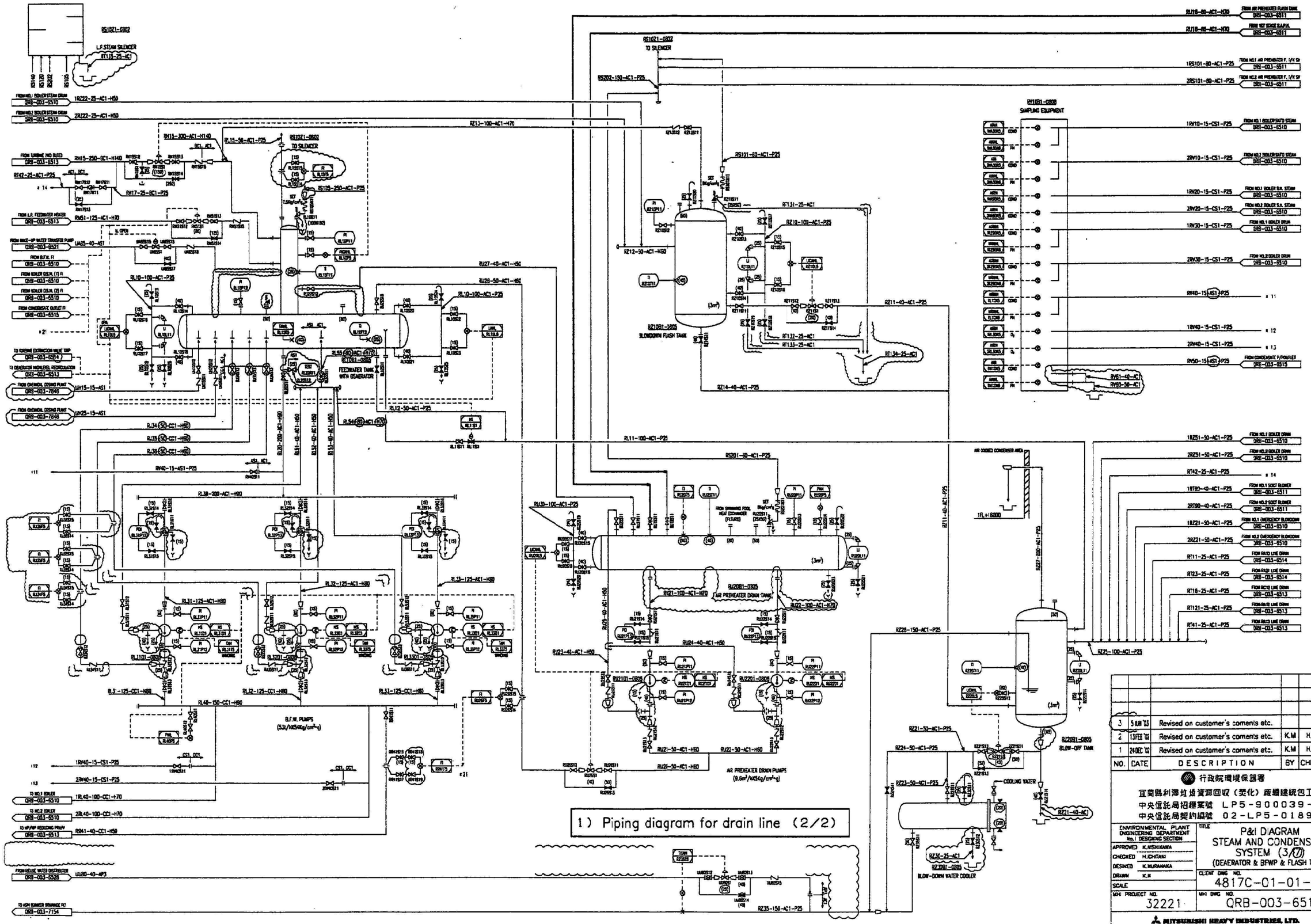
MHI DWG NO. QRB-003-6511

REV. NO.

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

DRAWN ISSUED

1) Piping diagram for drain line (1/2)


1) Piping diagram for drain line (2/2)
L.P.STEAM SILENCER
RT1.15-25-AC1
TO SILENCER
RZ1.3-100-AC1-H70
RZ12-50-AC1-H50
RZ14-40-AC1-P25
RZ11-40-AC1-P25
RZ10-100-AC1-P25
RZ10B1-0805
BLOWDOWN FLASH TANK
RT1.51-25-AC1
RT1.32-25-AC1
RT1.33-25-AC1
RT1.34-25-AC1
RV1081-0808
SAMPLING EQUIPMENT
RV61-50-AC1
RV60-50-AC1
FEEDWATER TANK WITH DEAERATOR
RZ1081-0805
AIR PREHEATER DRAIN TANK
RZ21-100-AC1-H70
RZ22-100-AC1-H70
RZ2101-0805
RZ2201-0805
AIR PREHEATER DRAIN PUMPS
(9.6m³/h×54kg/cm²-g)
RZ21-50-AC1-H50
RZ22-50-AC1-H50
RZ23-40-AC1-H50
RZ24-40-AC1-H50
RZ25-100-AC1-P25
RZ27-40-AC1-H50
RZ28-50-AC1-H50
RZ201-80-AC1-P25
RZ202-150-AC1-P25
RZ203-100-AC1-H70
RZ204-100-AC1-H70
RZ205-40-AC1-H50
RZ206-40-AC1-H50
RZ207-40-AC1-H50
RZ208-40-AC1-H50
RZ209-200-AC1-H90
RZ210-100-AC1-P25
RZ211-40-AC1-P25
RZ227-200-AC1-P25
RZ228-150-AC1-P25
RZ23-50-AC1-P25
RZ24-50-AC1-P25
RZ2081-0805
BLOW-OFF TANK
RZ208B-0805
BLOW-DOWN WATER COOLER
COOLING WATER
RZ21-40-AC1
RZ36-25-AC1
RZ35-150-AC1-P25
RL38-200-AC1-H90
RL32-125-AC1-H90
RL33-125-AC1-H90
RL31-125-AC1-H90
RL40-150-CC1-H90
RL34-50-CC1-H90
RL35-50-CC1-H90
RL36-50-CC1-H90
RL37-40-CC1-H90
RL38-40-CC1-H90
RL39-40-CC1-H90
RL10-100-AC1-P25
RL11-100-AC1-P25
RL12-50-AC1-P25
RL54-80-AC1-H70
RL10-100-AC1-H70
RL15-50-AC1-P25
RL10B-100-AC1-P25
RL10B-250-AC1-P25
RS101-80-AC1-P25
RS102-150-AC1-P25
RS102Z1-0802
RS101Z1-0802
RS103Z1-0802
RS104Z1-0802
RS105Z1-0802
RH13-300-AC1-H140
RH17-25-AC1-P25
RH15-250-AC1-H140
RT42-25-AC1-P25
RW51-125-AC1-H70
RW25-40-AS1
RW15-15-AS1
RW40-15-AS1-P25
RW50-15-AS1-P25
1RW40-15-CS1-P25
2RW40-15-CS1-P25
1RW10-15-CS1-P25
2RW10-15-CS1-P25
1RW20-15-CS1-P25
2RW20-15-CS1-P25
1RW30-15-CS1-P25
2RW30-15-CS1-P25
1RZ22-25-AC1-H50
2RZ22-25-AC1-H50
1RS101-80-AC1-P25
2RS101-80-AC1-P25
1RZ51-50-AC1-P25
2RZ51-50-AC1-P25
1RT80-40-AC1-P25
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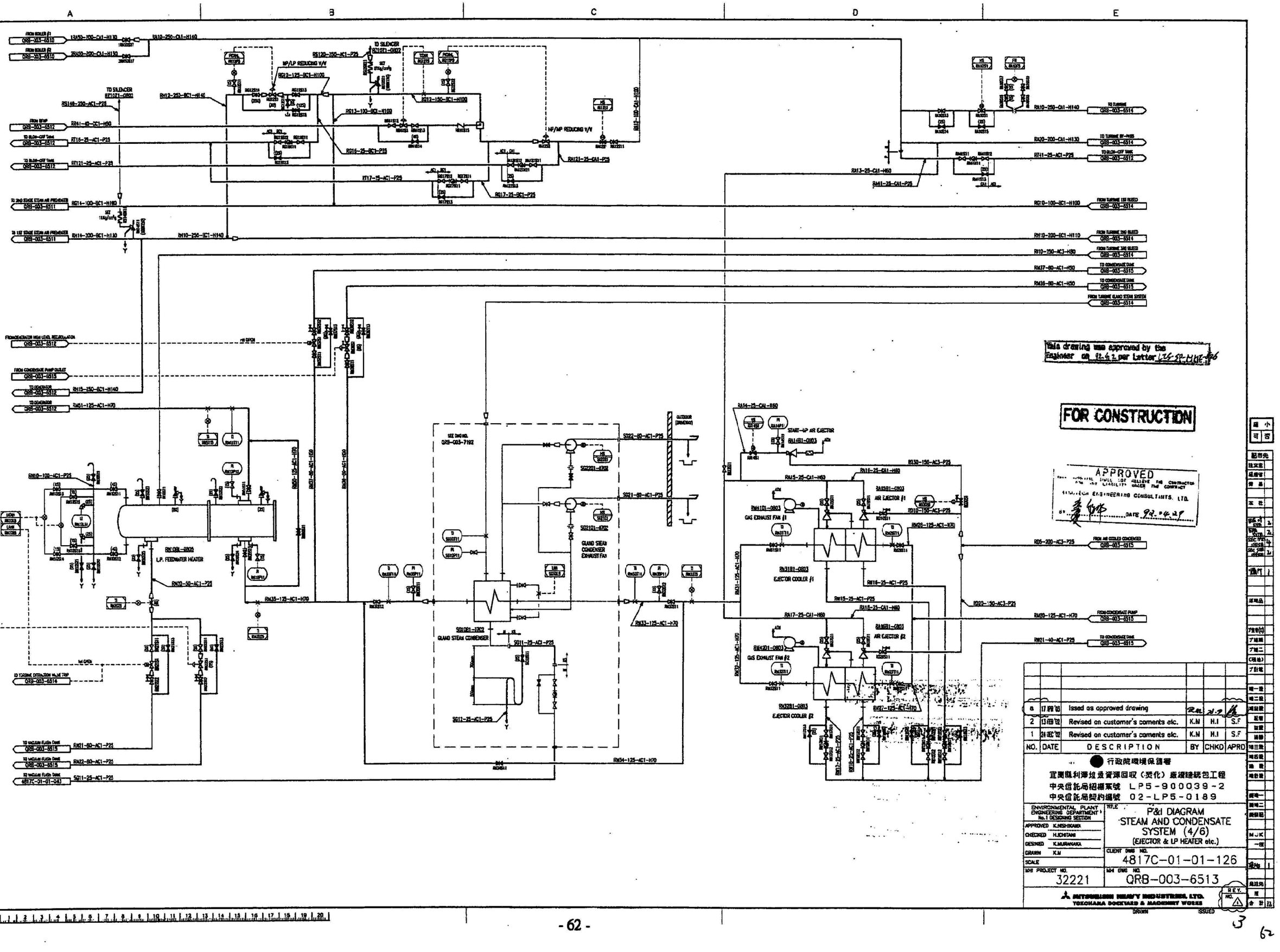
1RZ21-50-AC1-P25
2RZ21-50-AC1-P25
1RT11-25-AC1-P25
1RT23-25-AC1-P25
1RT16-25-AC1-P25
1RT121-25-AC1-P25
RT41-25-AC1-P25
1RL40-100-CC1-H70
2RL40-100-CC1-H70
RW41-40-CC1-H50
RW25-15-AS1
RW15-15-AS1
RU27-40-AC1-H50
RU28-50-AC1-H50
RU10-100-AC1-H70
RU10-100-AC1-P25
RU24-40-AC1-H50
RU21-50-AC1-H50
RU22-50-AC1-H50
RU23-40-AC1-H50
RU10B-100-AC1-P25
RU2081-0805
RU208B-0805
RU2101-0805
RU2201-0805
RU30-15-AS1
RU80-40-AP3
RZ35-150-AC1-P25
B.F.W. PUMPS
(53t/h×54kg/cm²-g)
FROM MAKE-UP WATER TRANSFER PUMP
ORB-003-6521
FROM B.F.W. R
ORB-003-6510
FROM BOILER DRUM (1) R
ORB-003-6510
FROM BOILER DRUM (2) R
ORB-003-6510
FROM CONDENSATE OUTLET R
ORB-003-6515
FROM CHEMICAL DOSING PUMP
ORB-003-7846
TO TURBINE EXTRACTION VALVE CHP
ORB-003-6514
TO DEAERATOR MANUFACTURE RECIRCULATION
ORB-003-6513
TO HP/INP REDUCING PRV
ORB-003-6513
FROM REUSE WATER DISTRIBUTER
ORB-003-6528
TO ASH HOPPER DRAINAGE PIT
ORB-003-7154
TO NO.1 BOILER
ORB-003-6510
TO NO.2 BOILER
ORB-003-6510
FROM NO.1 BOILER STEAM DRUM
ORB-003-6510
FROM NO.2 BOILER STEAM DRUM
ORB-003-6510
FROM TURBINE (NO BLEED)
ORB-003-6513
FROM L.P. FEEDWATER HEATER
ORB-003-6513
FROM AIR PREHEATER FLASH TANK
ORB-003-6511
FROM NO.1 SOOT BLOWER
ORB-003-6511
FROM NO.2 SOOT BLOWER
ORB-003-6511
FROM NO.1 EMERGENCY BLOWDOWN
ORB-003-6510
FROM NO.2 EMERGENCY BLOWDOWN
ORB-003-6510
FROM RAID LINE DRAIN
ORB-003-6514
FROM RAID LINE DRAIN
ORB-003-6514
FROM RAID LINE DRAIN
ORB-003-6513
FROM RAID LINE DRAIN
ORB-003-6513
FROM RAID LINE DRAIN
ORB-003-6513
FROM NO.1 AIR PREHEATER F. I/V SV
ORB-003-6511
FROM NO.2 AIR PREHEATER F. I/V SV
ORB-003-6511
FROM NO.1 BOILER SATD STEAM
ORB-003-6510
FROM NO.2 BOILER SATD STEAM
ORB-003-6510
FROM NO.1 BOILER S.H. STEAM
ORB-003-6510
FROM NO.2 BOILER S.H. STEAM
ORB-003-6510
FROM NO.1 BOILER DRUM
ORB-003-6510
FROM NO.2 BOILER DRUM
ORB-003-6510
FROM CONDENSATE P/PDUALEX
ORB-003-6515
AIR COOLED CONDENSER AREA
1FL+16000
1 Revised on customer's coments etc. K.M H.I S.F
2 13FEB '02 Revised on customer's coments etc. K.M H.I S.F
3 5 JAN '03 Revised on customer's coments etc.
NO. DATE DESCRIPTION BY CHKD APRD
行政院環境保護署
宜蘭縣利澤垃圾資源回收(焚化)廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189
ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION
APPROVED K.NISHIKAWA
CHECKED H.ICHITANI
DESIGNED K.MURAMAKA
DRAWN K.M
SCALE
MHI PROJECT NO. 32221
TITLE P&I DIAGRAM STEAM AND CONDENSATE SYSTEM (3/7) (DEAERATOR & BFWP & FLASH TANK)
CLIENT DWG NO. 4817C-01-01-125
MHI DWG NO. QRB-003-6512
REV. NO. 2
MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED
縮小可否
設計先
設計支店
設備部
SV 部
本社
原燃品
プロセス(1)
プロセス(2)
(現地)プロセス
機一室
機二部
機械部
配管
建築
機器
機三部
機四部
電気
機計部
機械一
機械二
機械部
M.J.K
一技
設技先
理
合計



This drawing was approved by the Engineer on 92.4.2 per Letter L75-ST-MHE-496

FOR CONSTRUCTION

APPROVED
MITSUBISHI ENGINEERING CONSULTANTS, LTD.
DATE 92.4.27

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	17 APR '03	Issed as approved drawing			
2	13 FEB '02	Revised on customer's coments etc.	K.M	H.I	S.F
1	24 DEC '02	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION

APPROVED	K.NISHIHAMA
CHECKED	H.ICHITANI
DESIGNED	K.MURANAKA
DRAWN	K.M
SCALE	
MHI PROJECT NO.	32221

TITLE: P&I DIAGRAM STEAM AND CONDENSATE SYSTEM (4/6) (EJECTOR & LP HEATER etc.)

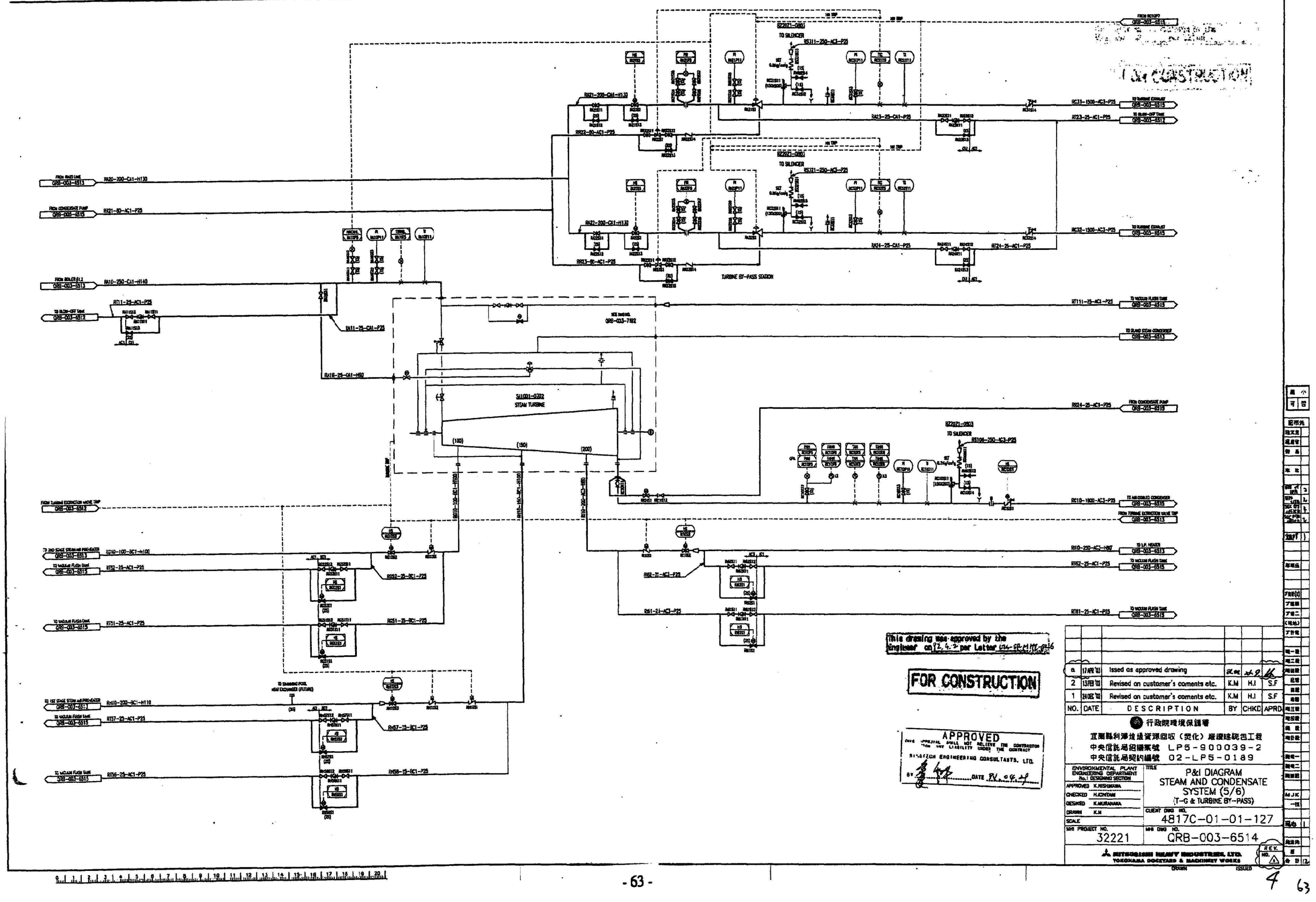
CLIENT DWG NO. 4817C-01-01-126

MHI DWG NO. QRB-003-6513

REV. NO. 3

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

DRAWN ISSUED



NO.	DATE	DESCRIPTION	BY	CHKD	APPD
a	17APR'97	Issed as approved drawing	K.M	H.I	S.F
2	13FEB'97	Revised on customer's coments etc.	K.M	H.I	S.F
1	24DEC'96	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	
APPROVED	K.NISHIKAWA
CHECKED	H.ICHITANI
DESIGNED	K.MURANAKA
DRAWN	K.M
SCALE	
MHI PROJECT NO.	32221

TITLE: P&I DIAGRAM STEAM AND CONDENSATE SYSTEM (5/6) (T-G & TURBINE BY-PASS)

CLIENT DWG NO. 4817C-01-01-127

MHI DWG NO. QRB-003-6514

REV. NO. a

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

DRAWN ISSUED

This drawing was approved by the Engineer on 9.4.5 per Letter CS-97-107-26

FOR CONSTRUCTION

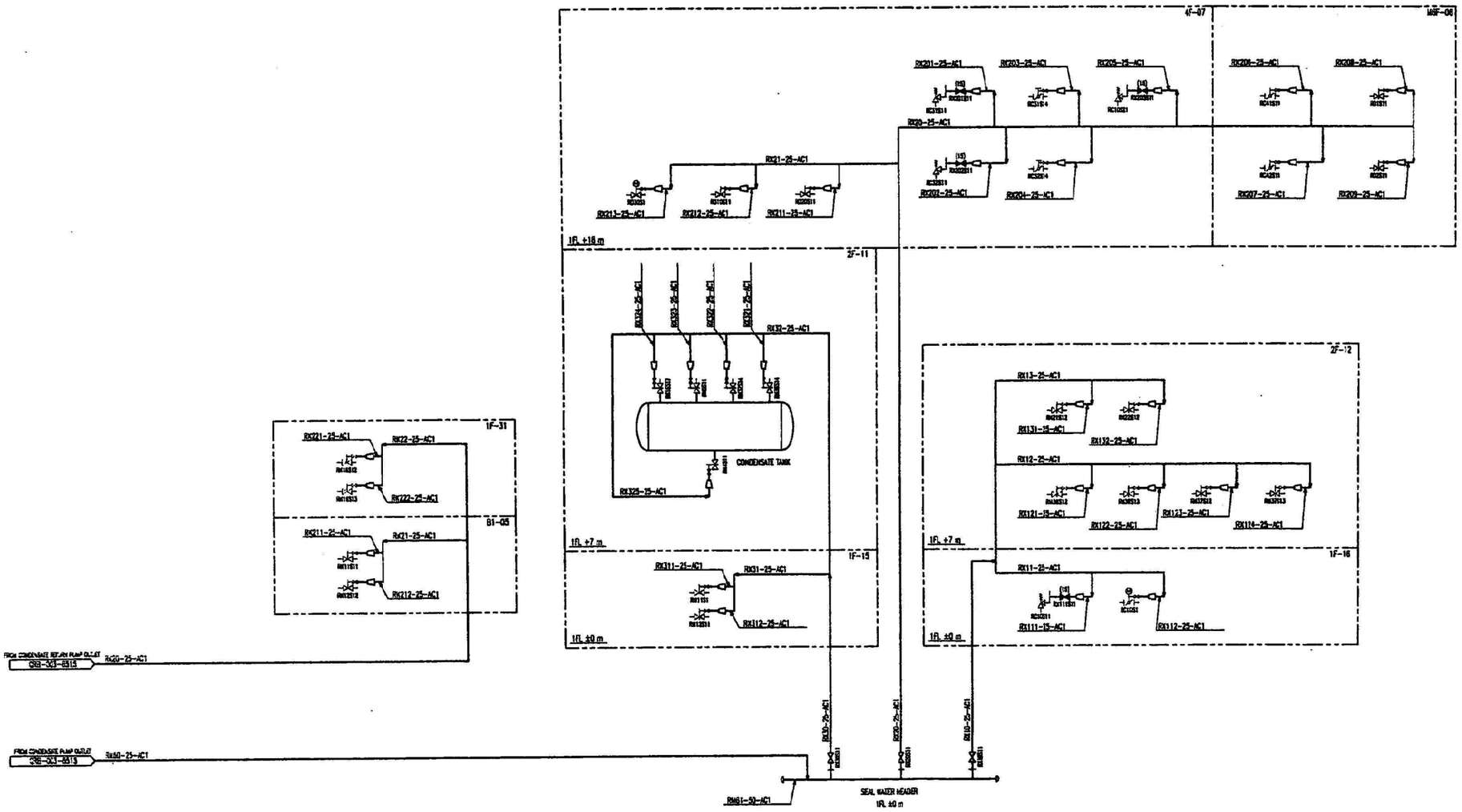
APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY ... DATE 9.4.05

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	17 APR '03	Issed as approved drawing			
2	15 FEB '02	Revised on customer's coments etc.	K.M	H.I	S.F
1	24 DEC '02	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署
宣蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	
APPROVED K.NISHIKAWA	TITLE: P&I DIAGRAM STEAM AND CONDENSATE SYSTEM (6/6) (TURBINE & EXH & CONDENSER)
CHECKED H.ICHITANI	
DESIGNED K.MURAMAKA	
DRAWN K.M	CLIENT DWG NO. 4817C-01-01-128
SCALE	
MHI PROJECT NO. 32221	MHI DWG NO. QRB-003-6515

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA SHIPYARD & MACHINERY WORKS
DRAWN ISSUED REV. NO. a



NO.	DATE	DESCRIPTION	BY	CHKD	APRD

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION

APPROVED

CHECKED

DESIGNED KM

DRAWN

SCALE

MHI PROJECT NO. 32221

TITLE: P&I DIAGRAM STEAM AND CONDENSATE SYSTEM (7/7) (SEAL WATER)

CLIENT DWG NO. 4817C-01-01-232

MHI DWG NO. QRB-003-7839

REV. NO.

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

DRAWN ISSUED

This drawing was approved by the Engineer : on 97.4.1 per Letter 128-SE-MHI-026

FOR CONSTRUCTION

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
TAIPOWER ENGINEERING CONSULTANTS, LTD.
BY [signature] DATE 90.06.27

FROM SEAL AIR LINE QRB-001-6521 → 1US6-25-AC4
FROM SEAL AIR LINE QRB-001-6521 → 1US4-25-AC4

1US54-25-AC4 1US55-25-AC4 1US53-25-AC4 1US56-25-AC4 1US52-25-AC4 1US57-25-AC4 1US51-25-AC4 1US58-25-AC4 1US50-25-AC4 1US59-25-AC4
PEEP HOLE
NO.1 BOILER
1US50-40-AC4

BOILER RIGHT SIDE WALL
1NW17-40-AC4 1NW16-40-AC4 1NW15-40-AC4 1NW10-80-AC4
1NW14-40-AC4 1NW13-40-AC4 1NW12-40-AC4 1NW11-40-AC4

ECONOMIZER REAR WALL
1NW22-40-AC4 1NW21-40-AC4 1NW24-40-AC4 1NW23-40-AC4 1NW26-40-AC4 1NW25-40-AC4 1NW20-80-AC4
1NW28-40-AC4 1NW27-40-AC4 1NW30-40-AC4 1NW29-40-AC4 1NW32-40-AC4 1NW31-40-AC4

NO.1
1NW71-40-AC4 1NW72-40-AC4 1NW73-40-AC4 1NW74-40-AC4 UREA INJECTION NOZZLES
1NW81-40-AC4 1NW82-40-AC4 1NW83-40-AC4 REFUSE DRAINAGE INJECTION NOZZLES

NO.2
2NW1-150-AC4 2NW70-80-AC4 2NW80-80-AC4

1NW2-150-AC4
1NW1-150-AC4
1NW70-80-AC4
1NW80-80-AC4
1NW1-200-AC4
2NW1-200-AC4

PI 1NP1P11 PI 2NP1P11
1N1J001-1003 2N1J201-1003
BURNER FANS

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	17 APR '03	Issed as approved drawing	K.M	H.I	S.F
1	24 DEC '02	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION
APPROVED K.NISHIKAWA
CHECKED H.ICHITANI
DESIGNED K.MURANAKA
DRAWN K.M
SCALE
MHI PROJECT NO. 32221

TITLE
P&I DIAGRAM
SEALING AIR SYSTEM
CLIENT DWG NO. 4817C-01-01-132
MHI DWG NO. QRB-003-6516
REV. NO. 1

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED

This drawing was approved by the Engineer on 12.9.2 per Letter LLS-SP-MAT-618

FOR CONSTRUCTION

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE 92.12.27

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	17 APR '93	Issed as approved drawing			
2	13 FEB '92	Revised on customer's coments etc.	K.M	H.I	S.F
1	24 DEC '92	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION

APPROVED K.NISHIDUKA
CHECKED H.ICHIKAWA
DESIGNED K.MURANAKA
DRAWN K.M
SCALE
MHI PROJECT NO. 32221

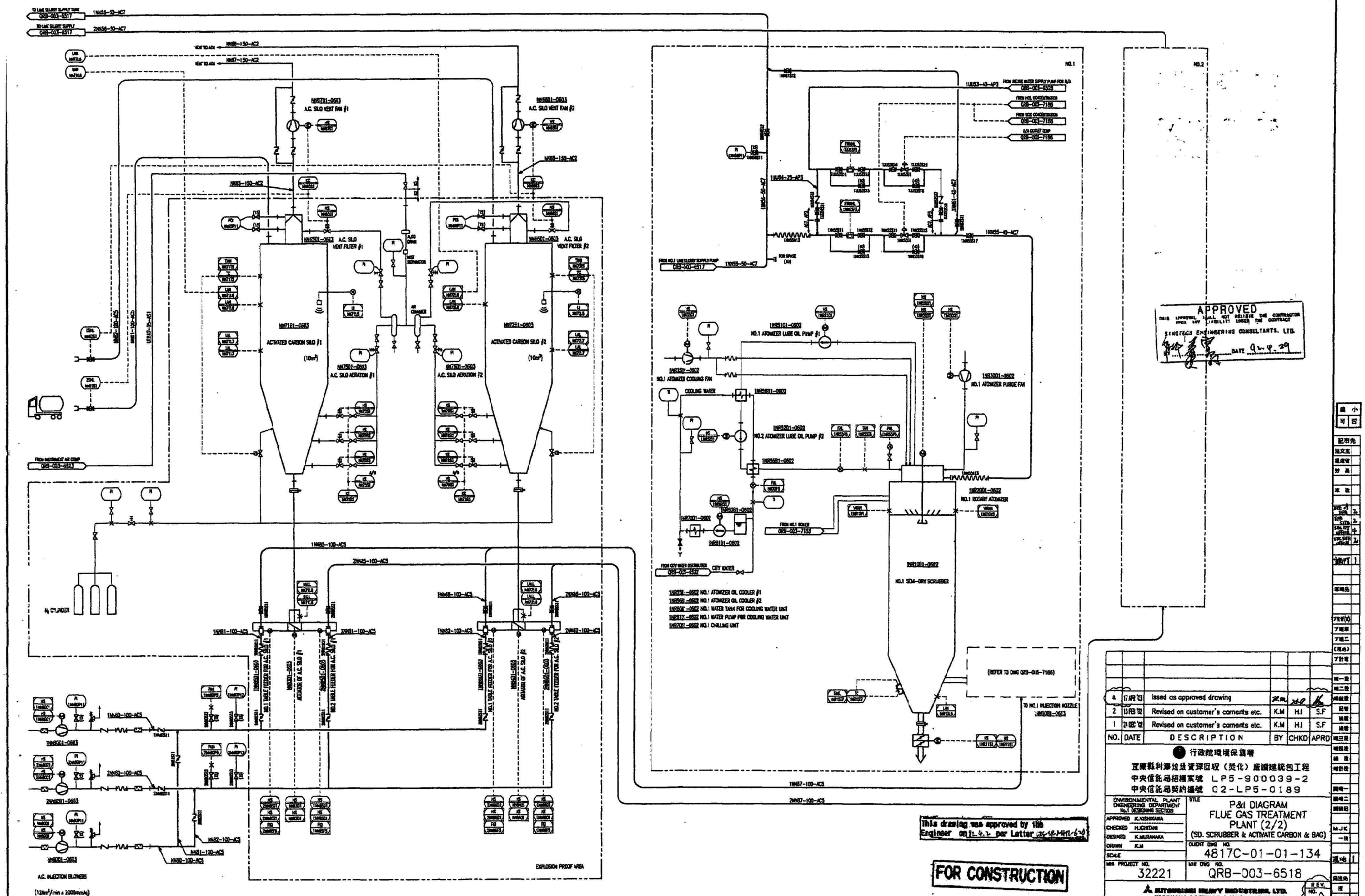
TITLE P&I DIAGRAM FLUE GAS TREATMENT PLANT (1/2) (LIME SILO & LIME SLURRY)

CLIENT DWG NO. 4817C-01-01-133

MHI DWG NO. QRB-003-6517

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA SHIPYARD & MACHINERY WORKS

DRAWN ISSUED REV. NO. a



NO.	DATE	DESCRIPTION	BY	CHKD	APRD
4	17 APR '03	Issued as approved drawing			
3	15 FEB '02	Revised on customer's coments etc.	K.M	H.I	S.F
2	21 DEC '00	Revised on customer's coments etc.	K.M	H.I	S.F
1	24 OCT '00	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION

APPROVED K.NISHIKAWA
CHECKED H.ICHITANI
DESIGNED K.MURAMAKA
DRAWN K.M
SCALE

TITLE: P&I DIAGRAM FLUE GAS TREATMENT PLANT (2/2) (SD. SCRUBBER & ACTIVATE CARBON & BAG)

MHI PROJECT NO. 32221

CLIENT DWG NO. 4817C-01-01-134

MHI DWG NO. QRB-003-6518

REV. NO. 4

MITSUBISHI HEAVY INDUSTRIES, LTD. TAKASAGO DOCKYARD & MACHINERY WORKS

DRAWN ISSUED

NO.1 BAG FILTER

FROM SEMI-DRY SCRUBBER

AIR HEADER

COMPARTMENT 1 | COMPARTMENT 2 | COMPARTMENT 3 | COMPARTMENT 4

1NS10B-0802
NO.1 BAG FILTER

△ a : TO NO.1 BAG FILTER CONVEYOR #1
SEE DWG NO. QRB-003-7186

COMPARTMENT 5 | COMPARTMENT 6 | COMPARTMENT 7 | COMPARTMENT 8

△ a : TO NO.1 BAG FILTER CONVEYOR #2
SEE DWG NO. QRB-003-7186

TO I.D.F

AIR FILTER

QRB-003-7186

FOR CONSTRUCTION

NO.2
BAG FILTER
FOR CONSTRUCTION

This drawing was approved by the Engineer on 91.4.2 per Letter LLS-91-LTR-176

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE 91.4.29

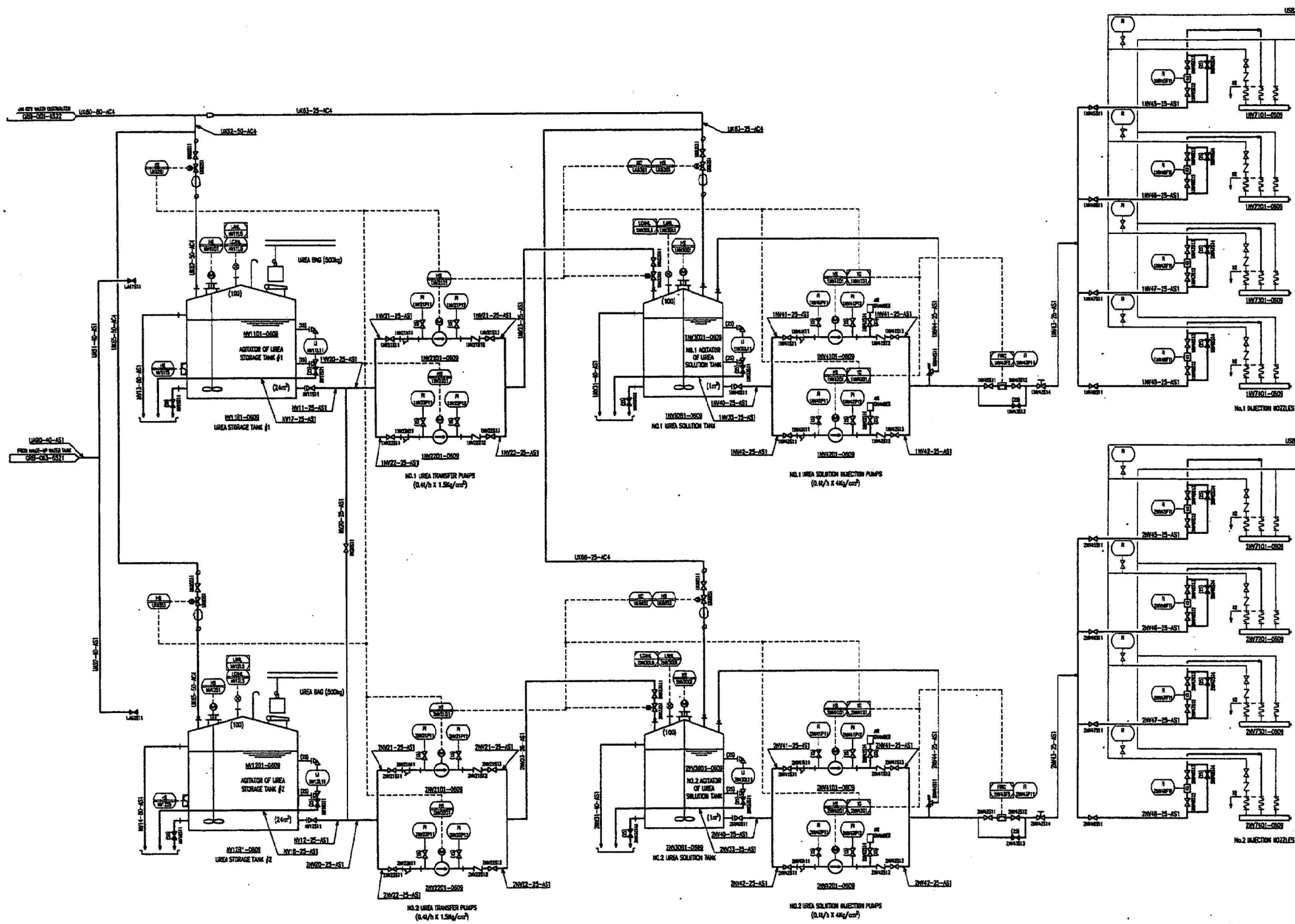
NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	17.APR.03	Issued as approved drawing	S.S.	M.M	
2	12.FEB.03	Rrevised	S.S.	N.N.	N.O. M.U.
1	19.DEC.02	Rrevised	S.S.	Y.I. N.N.	N.O. M.U.

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT NO.2 DESIGNING SECTION
APPROVED M.Ike
CHECKED
DESIGNED N.Nagahara
DRAWN S.Suzuki,S.Hamada
SCALE
MHI PROJECT NO. 32221

TITLE: P&I OF BAG FILTER
CLIENT DWG NO. 4817C-01-01-135
MHI DWG NO. QRB-388-7375
REV. NO. a

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED



This drawing was approved by the Engineer on 92.4.2 per Letter L/E 92-4442-E-6

FOR CONSTRUCTION

APPROVED

THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT

SINOTECH ENGINEERING CONSULTANTS, LTD.

DATE 92.4.29

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	17 APR '03	Issued as approved drawing	K.M	H.I	S.F
2	13 FEB '02	Revised on customer's coments etc.	K.M	H.I	S.F
1	24 DEC '02	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠細建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION

APPROVED K.NISHIKAWA
CHECKED H.ICHITANI
DESIGNED K.MURANAKA
DRAWN K.M
SCALE

TITLE: P&I DIAGRAM SNCR NOX REMOVAL SYSTEM

MHI PROJECT NO. 32221

CLIENT DWG NO. 4817C-01-01-136

MHI DWG NO. QRB-003-6519

REV. NO. a

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA SHIPYARD & MACHINERY WORKS

DRAWN ISSUED

This drawing was approved by the Engineer on 15-4-02 per Letter 1-15-02-1447-026

FOR CONSTRUCTION

APPROVED
THIS APPROVAL DOES NOT RELIEVE THE CONTRACTOR OF ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY ... DATE 02.04.29

EQUIPMENT COOLING WATER COOLERS

EXPANSION TANK

EQUIPMENT COOLING WATER PUMPS (310t/h X 4.5kg/cm²)

HYDRAULIC UNIT FOR REFUSE DUMPING GATE 7DE501-0203

(COOLER FOR OIL TANK)
HYDRAULIC UNIT FOR BULKY REFUSE SHEAR 9KS001-0204
(COOLER FOR OIL CIRCUIT)

PLANT AIR COMPRESSOR 8JZ101-0308

INSTRUMENT AIR COMPRESSOR 1T1101-1502

STAND-BY AIR COMPRESSOR 1T1101-1502

NO.2 ITV CAMERA (BOILER DRUM)

NO.2 STOKER HYDRAULIC UNIT 2NE0501-0303

NO.2 ITV CAMERA (FURNECE)

NO.1 ITV CAMERA (BOILER DRUM)

NO.1 STOKER HYDRAULIC UNIT 1NE0501-0503

NO.1 ITV CAMERA (FURNECE)

NO.2 INDUCTED DRAFT FAN HYDRAULIC COUPLING

NO.2 INDUCTED DRAFT FAN SHAFT COOLING

NO.1 INDUCTED DRAFT FAN HYDRAULIC COUPLING

NO.1 INDUCTED DRAFT FAN SHAFT COOLING

SAMPLING EQUIPMENT

BLOW DOWN WATER COOLER 8LXG01-0205

AIR PREHEATER DRAIN PUMP #1 8JZ101-0806

AIR PREHEATER DRAIN PUMP #2 8JZZ01-0806

B.F.W. PUMP #1 8L310I-0308

B.F.W. PUMP #2 8L320I-0804

B.F.W. PUMP #3 8L330I-0805

GENERATOR AIR COOLER 8D10S1-0703

TURBINE GENERATOR OIL COOLER 8CS081-0704

NO.	DATE	DESCRIPTION	BY	CHKD	APRD.
4	17APR'02	Issued as approved drawing	K.M	H.I	S.F
3	13FEB'02	Revised on customer's coments etc.	K.M	H.I	S.F
2	24DEC'01	Revised on customer's coments etc.	K.M	H.I	S.F
1	24DEC'01	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署
宜蘭縣利澤垃圾資源回收(焚化)廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION

APPROVED	K.MISHIKAWA
CHECKED	K.ICHITANI
DESIGNED	K.MURAMAKA
DRAWN	K.M
SCALE	
MHI PROJECT NO.	32221

TITLE: P&I DIAGRAM EQUIPMENT COOLING WATER SYSTEM

CLIENT DWG NO. 4817C-01-01-137

MHI DWG NO. QRB-003-6520

REV. NO. 4

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

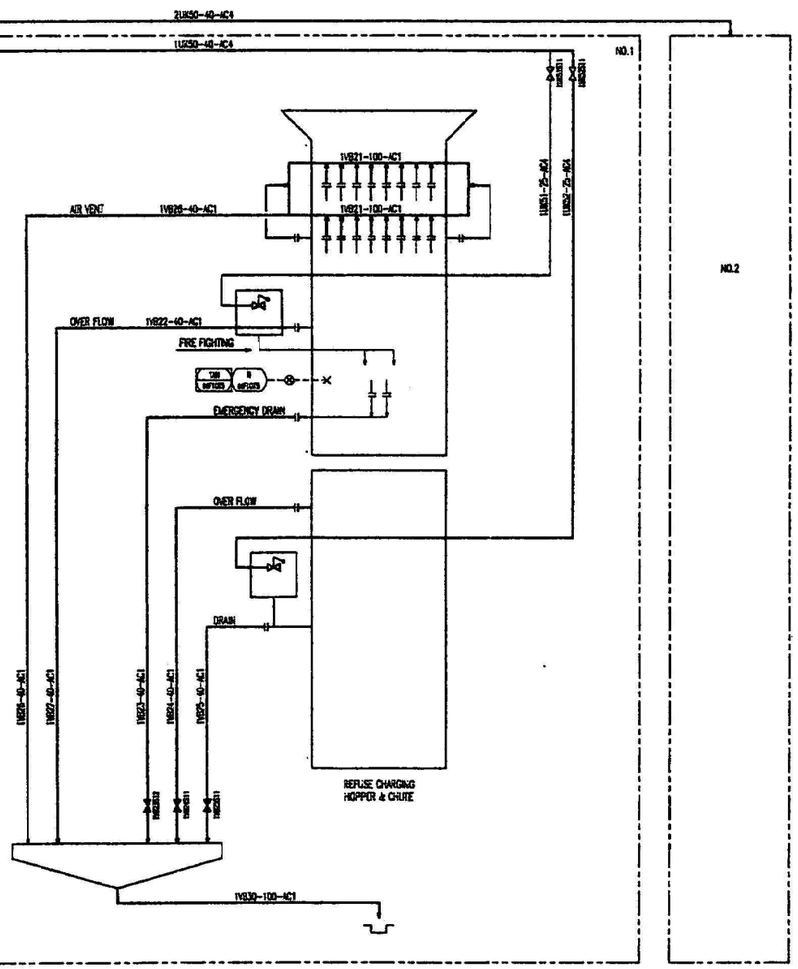
DRAWN ISSUED

This drawing was approved by the Engineer on 12.9.2 per Letter L25-52-Ha-0006

FOR CONSTRUCTION

APPROVED
APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY ... DATE 15.4.4

FROM CO-WASTE DISTRIBUTOR QRB-003-6522 2UK50-40-AC4
FROM CO-WASTE DISTRIBUTOR QRB-003-6522 1UK50-40-AC4



NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	17 APR '03	Issed as approved drawing	K.M	H.I	S.F
2	13 FEB '02	Revised on customer's coments etc.	K.M	H.I	S.F
1	24 DEC '02	Revised on customer's coments etc.	K.M	H.I	S.F

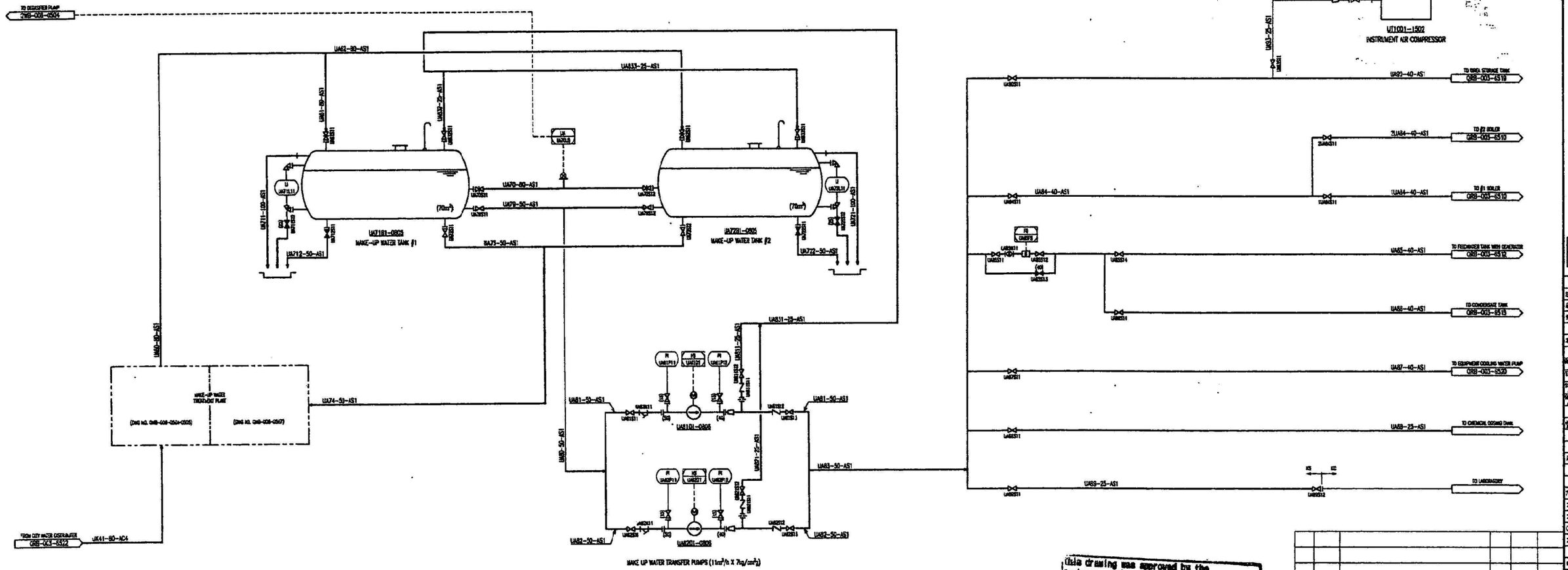
行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠建造統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION
APPROVED K.NISHIKAWA
CHECKED H.ICHITANI
DESIGNED K.MURAMAKA
DRAWN K.M
SCALE

TITLE
P&I DIAGRAM
FEED CHUTE COOLING WATER SUPPLY AND DRAIN

CLIENT DWG NO. 4817C-01-01-138
MHI PROJECT NO. 32221
MHI DWG NO. QRB-003-6887
REV. NO. a

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED



This drawing was approved by the Engineer on 12.4.2 per Letter UA-SD-0171-(12)

FOR CONSTRUCTION

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINGTECH ENGINEERING CONSULTANTS, LTD.
BY ... DATE 92.4.9

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	17 APR '02	Issued as approved drawing	K.M	H.I	S.F
2	13 FEB '02	Revised on customer's coments etc.	K.M	H.I	S.F
1	24 DEC '01	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION

APPROVED	K.NISHIKAWA
CHECKED	H.ICHITANI
DESIGNED	K.MURANAKA
DRAWN	K.M
SCALE	
MHI PROJECT NO.	32221

TITLE
P&I DIAGRAM
MAKE-UP WATER SYSTEM

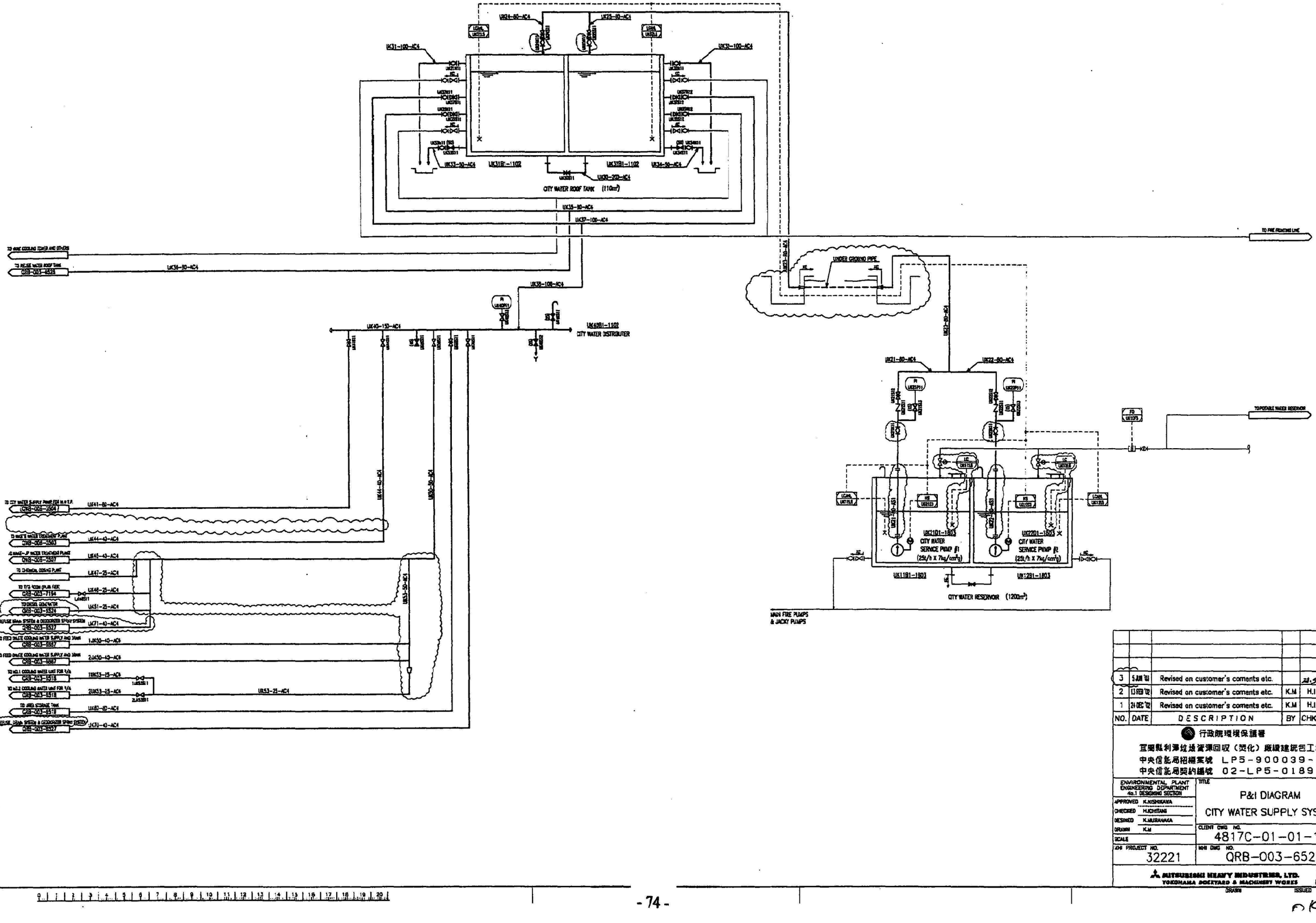
CLIENT DWG NO. 4817C-01-01-139
MHI DWG NO. QRB-003-6521

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA SHIPYARD & MACHINERY WORKS

REV. NO. 2

DRAWN ISSUED

13



NO.	DATE	DESCRIPTION	BY	CHKD	APRD
3	5 JAN '02	Revised on customer's coments etc.			
2	17 FEB '02	Revised on customer's coments etc.	K.M	H.I	S.F
1	21 DEC '01	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION

APPROVED K.NISHIKAWA
CHECKED H.ICHITANI
DESIGNED K.MURAMAKA
DRAWN K.M
SCALE

TITLE: P&I DIAGRAM
CITY WATER SUPPLY SYSTEM

CLIENT DWG NO. 4817C-01-01-140

JFE PROJECT NO. 32221

MHI DWG NO. QRB-003-6522

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA SHIPYARD & MACHINERY WORKS

REV. NO. 3

DRAWN ISSUED

This drawing was approved by the Engineer on 12.4.2 per Letter LS-92-MHI-026

FOR CONSTRUCTION

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY [signature] DATE 92.04.9

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	17 APR '03	Issed as approved drawing			
2	13 FEB '02	Revised on customer's coments etc.	K.M	H.I	S.F
1	24 DEC '02	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION
APPROVED K.NISHIKAWA
CHECKED H.ICHITANI
DESIGNED K.MURAKAWA
DRAWN K.M
SCALE

TITLE: P&I DIAGRAM SERVICE AIR AND INSTRUMENT AIR SYSTEM (1/2)
CLIENT DWG NO. 4817C-01-01-141
MHI PROJECT NO. 32221
MHI DWG NO. QRB-003-6523
REV. NO. 2

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

DRAWN 19 ISSUED 95

This drawing has approved by the Engineer on 12.4.2 per Letter

FOR CONSTRUCTION

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR OF ANY LIABILITY UNDER THE CONTRACT
FOR MITSUBISHI HEAVY INDUSTRIES, LTD.
DATE 94.04.04

NO.2 ECO. INLET FLUE GAS PRESS.
NO.2 SCRUBBER INLET FLUE GAS PRESS.
NO.2 BOILER OUTLET FLUE GAS FLOW
NO.2 BOILER OUTLET FLUE GAS FLOW (PURGE UNIT)
NO.1 ECO. INLET FLUE GAS PRESS.
NO.1 SCRUBBER INLET FLUE GAS PRESS.
NO.1 BOILER OUTLET FLUE GAS FLOW
NO.1 BOILER OUTLET FLUE GAS FLOW (PURGE UNIT)
TO NO.2 BAG FILTER
TO NO.1 BAG FILTER
NO.2 L.D.F. INLET GAS PRESS.
NO.1 L.D.F. INLET GAS PRESS.
LABORATORY / APPARATUS ROOM
NO.2 UREA INJECTION NOZZLE AIR CYL.
NO.1 UREA INJECTION NOZZLE AIR CYL.
NO.2 SCRUBBER INLET CEMS
NO.1 SCRUBBER INLET CEMS
NO.2 FURNACE GAS PRESS.
NO.1 FURNACE GAS PRESS.
NO.2 BAG FILTER DIFF PRESS.
NO.1 BAG FILTER DIFF PRESS.
NO.2 REFUSE DRAINAGE INJECTION NOZZLE AIR CYL.
NO.1 REFUSE DRAINAGE INJECTION NOZZLE AIR CYL.
NO.2 STACK INLET FLUE GAS FLOW (PURGE Unit)
NO.1 STACK INLET FLUE GAS FLOW (PURGE Unit)
NO.2 STAK INLET FLUE GAS FLOW
NO.1 STACK INLET FLUE GAS FLOW
NO.2 STAK INLET FLUE GAS PRESS.
NO.1 STACK INLET FLUE GAS PRESS.
NO.2 STACK INLET CEMS
NO.1 STACK INLET CEMS
NO.2 STOKER AIR CYL. CONTROL PANEL
NO.1 STOKER AIR CYL. CONTROL PANEL
NO.2 FIRE CHAMBER CAMERA
NO.1 FIRE CHAMBER CAMERA
INSTRUMENT WORK SHOP & SPARE PARTS ROOM
FLY ASH SOLIDFICATION TREATMENT AREA
TANK ROOM
T/G ROOM
TO LIME SLO AERATION
TO A.C. SLO AERATION
SEE QRB-003-6517
SEE QRB-003-6516
FROM INSTRUMENT AIR RECEIVER QRB-003-6521
MAKE-UP WATER TREATMENT PLANT SEE QWG-006-0507
UT5101-1502
UT5201-1502
AUXILIARY AIR DRYERS
OIL PURIFIER
WASTE WATER TREATMENT PLANT SEE QRB-006-0503
PUMP ROOM (1)

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	17 APR '94	issued as approved drawing			

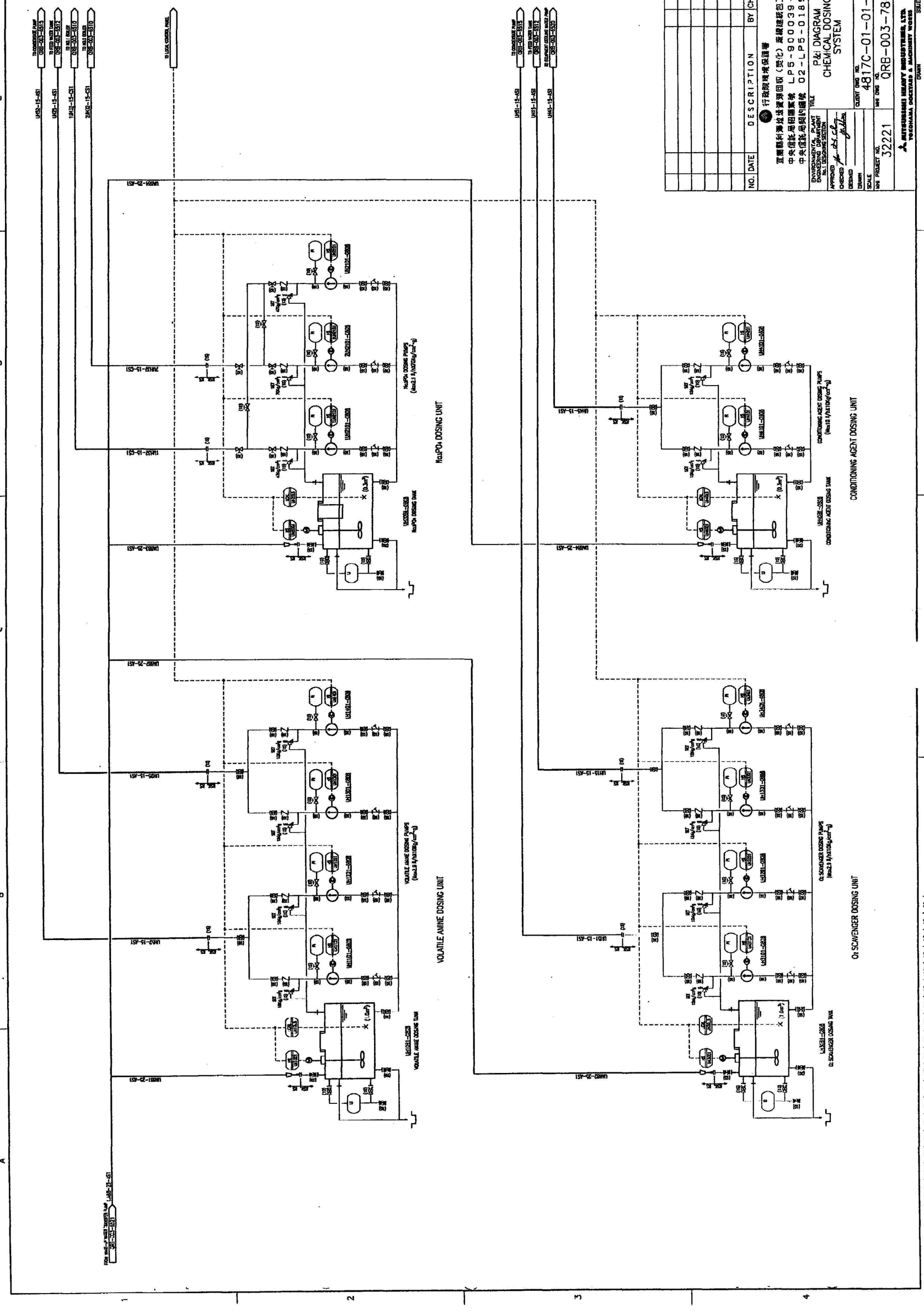
行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠總統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	TITLE: P&I DIAGRAM SERVICE AIR AND INSTRUMENT AIR SYSTEM (2/2)
APPROVED	
CHECKED	
DESIGNED	CLIENT DWG NO. 4817C-01-01-225
DRAWN	
SCALE	
MHI PROJECT NO. 32221	MHI DWG NO. QRB-003-7797

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

REV. NO. a ISSUED

15 76


NO. DATE DESCRIPTION BY CHKD APRD
宣蘭縣利澤垃圾資源回收(焚化)廠建設BOT計畫
中央信託局程開案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189
ENVIRONMENTAL PLANT DIVISION No.1 DESIGNING SECTION
APPROVED
CHECKED
DESIGNED
DRAWN
SCALE
TITLE P&I DIAGRAM CHEMICAL DOSING SYSTEM
CLIENT DWG NO. 4817C-01-01-235
MHI PROJECT NO. 32221
MHI DWG NO. QRB-003-7846
MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA, OKOZEKARD & MACHINERY WORKS
DRAWN
SEALED
NaOH DOSING UNIT
CONDITIONING AGENT DOSING UNIT
VOLATILE AMINE DOSING UNIT
O2 SCAVENGER DOSING UNIT

FLY ASH BUNKER

FLY ASH

FAN

AIR FILTER

JET PACK

CEMENT SILO

BAG FILTER

AERATION DEVICE

AIR HEDDER

VIBRATOR

SLIDE GATE

CEMENT FEEDER

CEMENT CONVEYOR

FLY ASH SILO

BAG FILTER

AERATION DEVICE

BRIDGE BREAKER

SLIDE GATE

FLY ASH FEEDER

FLY ASH FLOW METER

SELECT CONVEYOR

FROM REUSE WATER SUPPLY SYSTEM

AIR CHAMBER

FEED WATER TANK

FEED CHELATE

CHELATE TANK

KNEADING MACHINE

FROM WASTE WATER

PELLETIZING MACHINE

CURING CONVEYOR #1

EMERGENCY CONVEYOR

EMERGENCY CUSHION HOPPER

EMERGENCY CONVEYOR

EMERGENCY HUMIDIFIER

CURING CONVEYOR #2

FROM INSTRUMENT AIR SYSTEM

AIR TANK

※1 CEMENT SILO AERATION DEVICE

※2 CEMENT SILO BAG FILTER

※3 FLY ASH SILO AERATION DEVICE

※4 FLY ASH SILO BAG FILTER

※5 AIR FILTER AIR HEADDER

NO.	DATE	DESCRIPTION	BY	CHKD	APRD

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠續建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

TITLE: P&I DIAGRAM FLY ASH SOLIDIFICATION SYSTEM

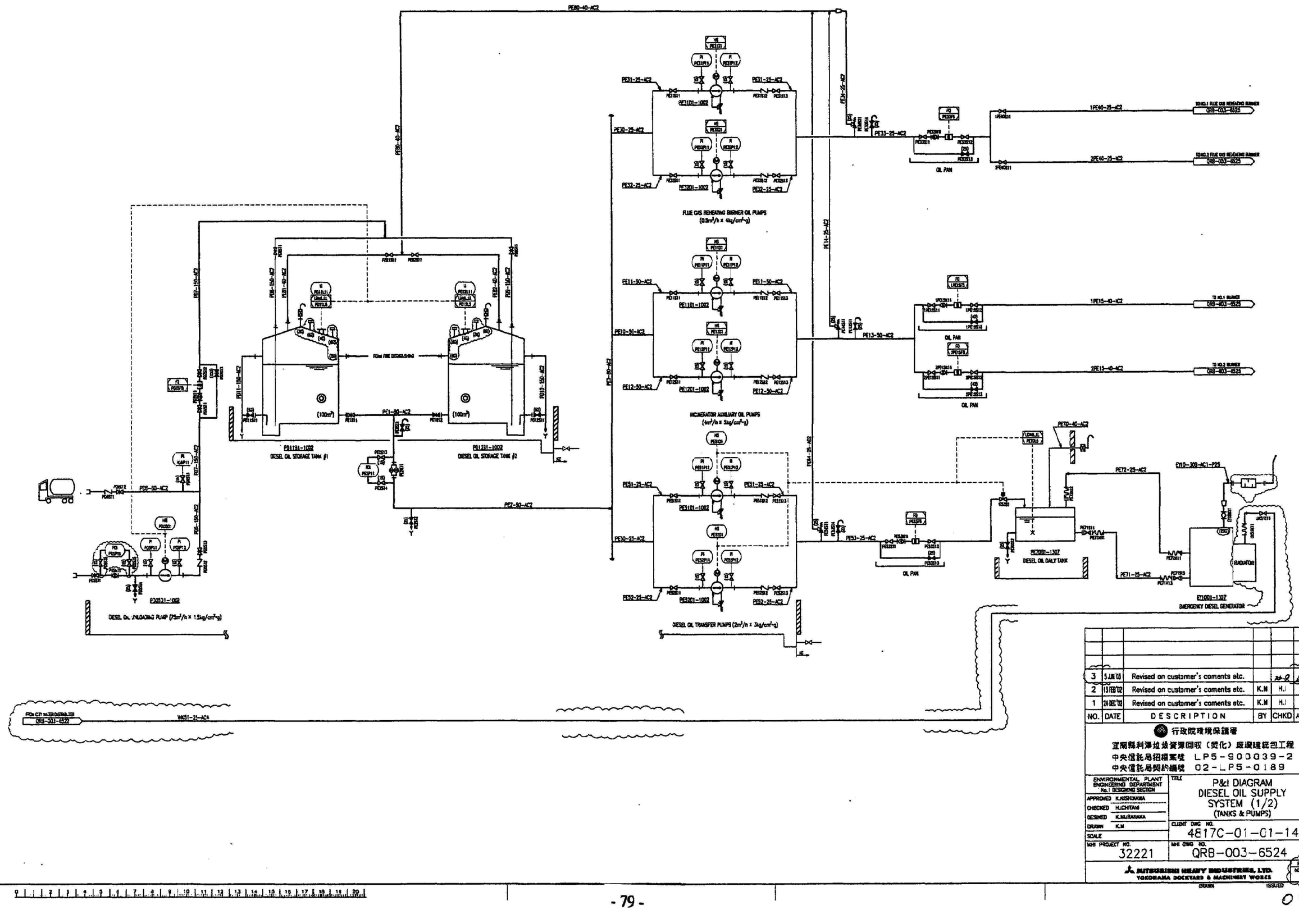
CLIENT DWG NO. 4817C-01-01-236

MHI PROJECT NO. 32221

MHI DWG NO. QRB-003-7847

REV. 0

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA SHIPYARD & MACHINERY WORKS



NO.	DATE	DESCRIPTION	BY	CHKD	APRD
3	5 JUN '03	Revised on customer's coments etc.			
2	13 FEB '02	Revised on customer's coments etc.	K.M	H.I	S.F
1	24 DEC '02	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION

APPROVED K.NISHIKAWA
CHECKED H.ICHITANI
DESIGNED K.MURANAKA
DRAWN K.M
SCALE

TITLE: P&I DIAGRAM DIESEL OIL SUPPLY SYSTEM (1/2) (TANKS & PUMPS)

CLIENT DWG NO. 4817C-01-01-142
MHI PROJECT NO. 32221
MHI DWG NO. QRB-003-6524

REV. NO. 3

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS

DRAWN ISSUED

This drawing was approved by the Engineer on 94.2.2 per Letter LTS-SD-HHZ-626

FOR CONSTRUCTION

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY 李雨梧 DATE 94.04.29

FROM FLUE GAS REHEATING BURNER OIL P/P QRB-003-6524 1PE40-25-AC2
FROM FLUE GAS REHEATING BURNER OIL P/P QRB-003-6524 2PE40-25-AC2
FROM INCINERATOR AUXILIARY OIL P/P QRB-003-6524 1PE15-40-AC2
FROM INCINERATOR AUXILIARY OIL P/P QRB-003-6524 2PE15-40-AC2
FROM NO.1 BURNER FAN QRB-003-7155

1PE40-25-AC2
1PG24-25-AC4
1PE21-25-AC2
1PG21-25-AC4
1PE30-40-AC2
1PE22-25-AC2
1PG22-25-AC4
1PE23-25-AC2
1PG23-25-AC4
1PG10-25-AC4
2PG10-25-AC4
1PG40-25-AC4

1NZ31X1-1003 NO.1 SIDE BURNER #2
1NZ20X1-1003 NO.1 REAR BURNER #1
1NZ21X1-1003 NO.1 REAR BURNER #2
1NJ30X1-1003 NO.1 SIDE BURNER #1
1NZ30X1-1008 NO.1 FLUE GAS REHEATING BURNER

FROM NO.1 SECONDARY AIR FAN FOR FLUE GAS REHEATING BURNER QRB-003-7156

PROPANE GAS CYLINDER
PROPANE GAS CYLINDER
PROPANE GAS CYLINDER
PROPANE GAS CYLINDER

NO.1
NO.2
NO.3

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	17APR'03	Issued as approved drawing	K.M	H.I	S.F
2	13FEB'02	Revised on customer's coments etc.	K.M	H.I	S.F
1	24DEC'02	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION
APPROVED K.NISHIKAWA
CHECKED H.ICHITANI
DESIGNED K.MURAMAKA
DRAWN K.M
SCALE
MHI PROJECT NO. 32221

TITLE: P&I DIAGRAM DIESEL OIL SUPPLY SYSTEM (2/2) (DETAILED BURNER AROUND)
CLIENT DWG NO. 4817C-01-01-143
MHI DWG NO. QRB-003-6525

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA SHIPYARD & MACHINERY WORKS
REV. NO. 1
DRAWN ISSUED 16

This drawing was approved by the Engineer on 92.8.2 per Letter 1258-MHI-628

FOR CONSTRUCTION

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
CHUNG-SHAN ENGINEERING CONSULTANTS, LTD.
DATE 92.06.27

REFUSE BUNKER AREA
REFUSE BUNKER
REFUSE BUNKER DRAINAGE PUMPS
U1108I-1505
U1120I-1505
U1108I-1505
REFUSE BUNKER DRAINAGE PIT #1
(6t/h × 3.5kg/cm²-g)
U1308I-1505
REFUSE BUNKER DRAINAGE FILTER #1
U1408I-1505
FILTRATE REFUSE DRAINAGE TANK
(7.5m³)
U1410I-1505
U1420I-1505
U1430I-1505
FILTRATE REFUSE DRAINAGE INJECTION PUMPS
(2.5t/h × 5.5kg/cm²-g)
U1830I-1505
NO.1 REFUSE DRAINAGE INJECTION NOZZLES
U1810I-1505
U1820I-1505
U1830I-1505
U2108I-1505
U2120I-1505
U2130I-1505
U2408I-1505
U2410I-1505
U2420I-1505
U2430I-1505
U2830I-1505
NO.2 REFUSE DRAINAGE INJECTION NOZZLES
U2810I-1505
U2820I-1505
U2830I-1505
FROM SERVICE AIR QRB-003-6523
FROM CITY WATER DISTRIBUTER QRB-003-6522
FROM SEALING AIR QRB-003-6518

NO.	DATE	DESCRIPTION	BY	CHKD	APPRO
a	17 APR '03	Issed as approved drawing	R.M	M.S	
2	13 FEB '02	Revised on customer's coments etc.	K.M	H.I	S.F
1	28 DEC '01	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠建造統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION
APPROVED K.NISHIKAWA
CHECKED H.ICHITANI
DESINED K.MURANOKA
DRAWN K.M
SCALE
MHI PROJECT NO. 32221

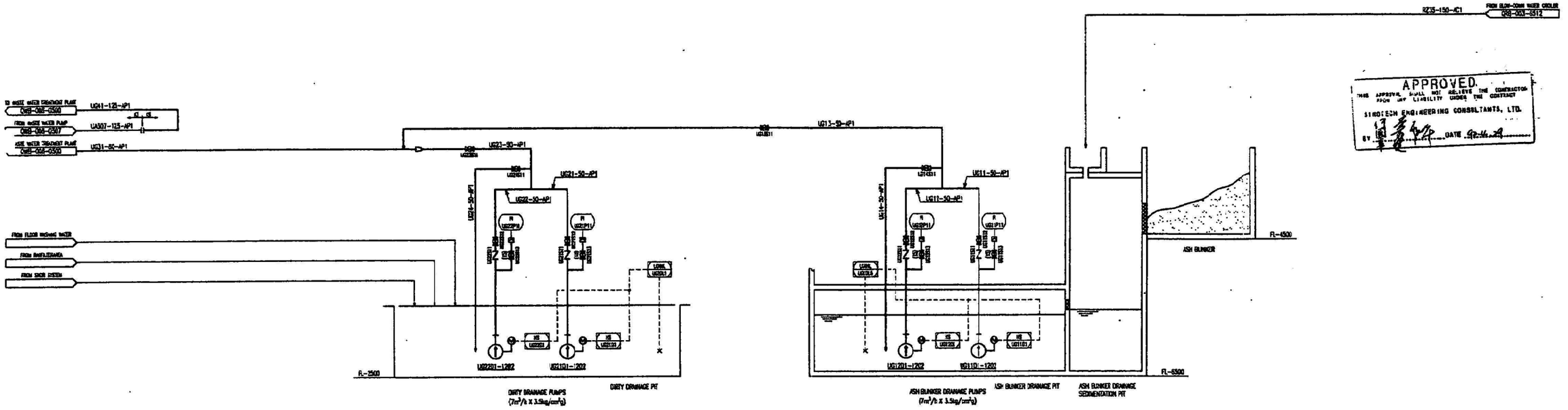
TITLE
P&I DIAGRAM
REFUSE DRAIN SYSTEM
CLIENT DWG NO. 4817C-01-01-144
MHI DWG NO. QRB-003-6527

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED REV. NO. 1

This drawing was approved by the Engineer on 12.4.2 per Letter L44-50-1477-E-96

FOR CONSTRUCTION

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY ... DATE 92.11.29



NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	7 MAR '03	Issued as approved drawing			
1	14 DEC '02	Revised on customer's comments etc.	K.M	H.I	S.F

行政院環境保護署
宜蘭縣冬山鄉垃圾資源回收（焚化）廠建造統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	TITLE: P&I DIAGRAM WASTE WATER COLLECTION SYSTEM
APPROVED K.NISHIKAWA	
CHECKED H.ICHITANI	
DESIGNED K.MURAMAKA	
DRAWN K.M	
SCALE	CLIENT DWG NO. 4817C-01-01-145
MHI PROJECT NO. 32221	MHI DWG NO. QRB-003-7154

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ... ISSUED ... REV. NO. A

This drawing was approved by the Engineer on 12.4.2 per Letter LPSSR-MHIC-096

FOR CONSTRUCTION

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY ... DATE 92.5.27

TO LIME SLURRY INJECTION LINE #1 — QRB-003-6517 — UA53-40-AP3
TO LIME SLURRY INJECTION LINE #2 — QRB-003-6517 — UA53-40-AP3

UA51-40-AP3 / UA52-40-AP3 — UA5181-1104 / UA5281-1104
REUSE WATER SUPPLY PUMPS FOR R/A (1.5m³/hr×3.2kg/cm²·g)

UA53-40-AP3

UA21-200-AC3 / UA31-200-AP3 — UA2181-1103 / UA3181-1103
UA22-200-AC3 / UA32-200-AP3 — UA2281-1103 / UA3281-1103
FIRE FIGHTING GUN BOOSTER PUMPS (200l/m×12kg/cm²·g)

UA24-200-AC3 — UA3101-1103
UA25-200-AC3 — UA3201-1103
FIRE FIGHTING GUNS

UA23-200-AC3

UA50-40-AP3

UA11-250-AP3

UA10-100-AP3 — UA10081-1104 REUSE WATER ROOF TANK (170m³)

UA36-80-AC4 — FROM CRY WATER ROOF TANK QRB-001-6522
REUSE WATER SUBMERSIBLE LEVEL/RELEASE WATER SUPPLY P/P
UA7-80-AP3
WA311-80-AP3 — FROM REUSE WATER SUPPLY PUMP QRB-003-6508

UA12-200-AP3 — TO CONSUMERS

UA40-200-AP3 — UA10081-1104 REUSE WATER DISTRIBUTOR

TO FLY ASH SOLIDIFICATION EQUIPMENT QRB-003-6523 — UAH1-25-AP3
TO LIME SLURRY TANK QRB-003-6517 — UAH3-100-AP3
TO WASTEWATER TREATMENT PLANT QRB-003-6543 — UA70-50-AP3
LOW-CONC WASTEWATER SUMP QRB-003-6512 — UA90-40-AP3

2NF45D1-0803 No.2 SLAG EXTRACTOR — 2UA852-25-AP3 — 2UA851-40-AP3
1NF45D1-0803 No.1 SLAG EXTRACTOR — 1UA852-25-AP3 — 1UA851-40-AP3
1UA81-50-AP3

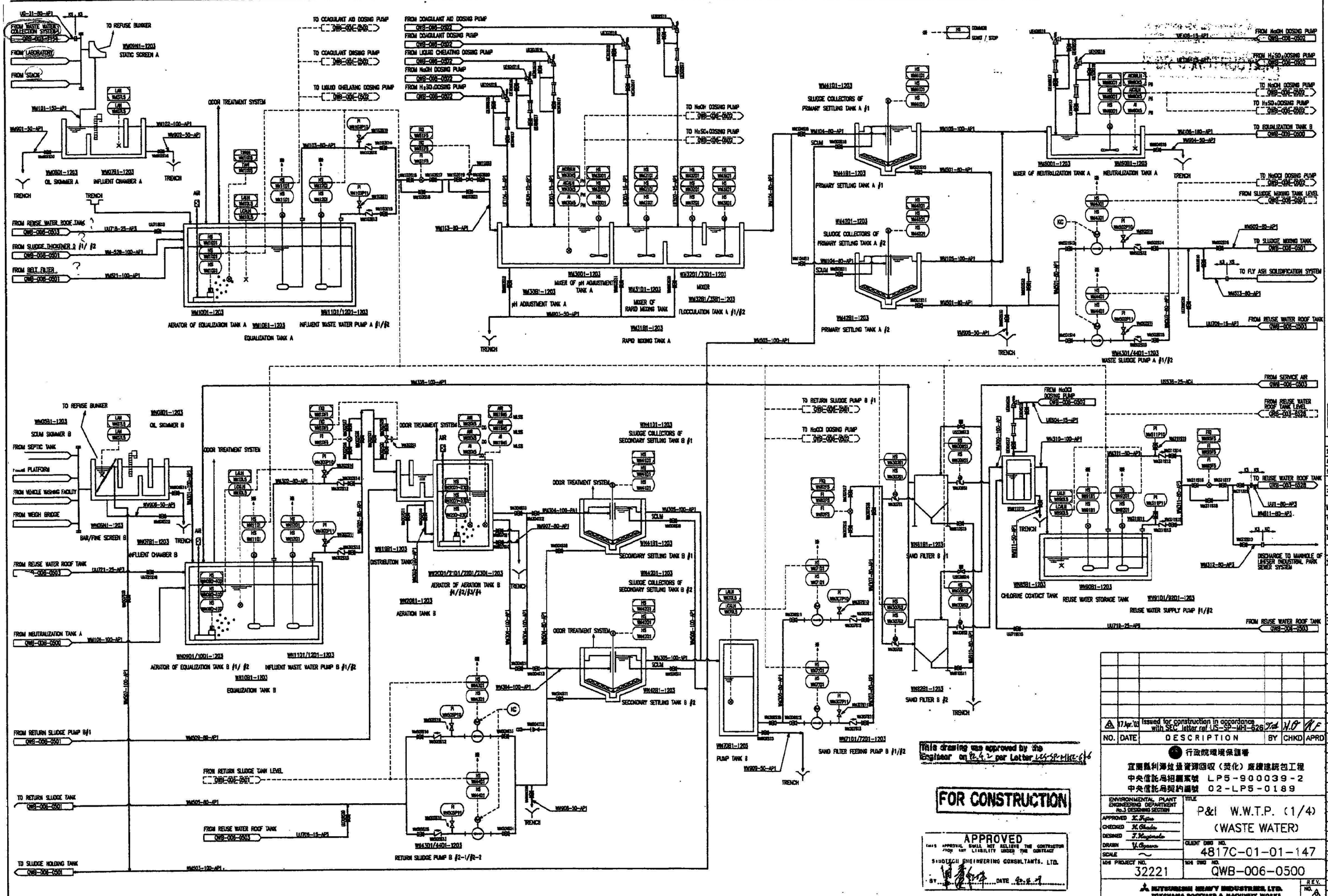
NO.	DATE	DESCRIPTION	BY	CHKD	APRD
a	17 APR '03	Issued as approved drawing	K.M	H.I	S.F
2	11 FEB '02	Revised on customer's coments etc.	K.M	H.I	S.F
1	21 DEC '02	Revised on customer's coments etc.	K.M	H.I	S.F

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠總承攬包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION
APPROVED K.NISHIHARA
CHECKED H.ICHITANI
DESIGNED K.MURANAKA
DRAWN K.M
SCALE
MH PROJECT NO. 32221

TITLE: P&I DIAGRAM REUSE WATER SUPPLY SYSTEM
CLIENT DWG NO. 4817C-01-01-146
MH DWG NO. QRB-003-6528
REV. NO. A

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA BOILERS & MACHINERY WORKS
DRAWN ISSUED


A
B
C
D
E
FROM WASTE WATER COLLECTION SYSTEM
QWB-006-PP01
TO REFUSE BUNKER
WN0BN1-1203
STATIC SCREEN A
FROM LABORATORY
FROM STACK
WN101-150-AP1
WN102-100-AP1
WN902-50-AP1
WN901-50-AP1
WN0B01-1203
OIL SKIMMER A
WN0701-1203
INFLUENT CHAMBER A
TRENCH
ODOR TREATMENT SYSTEM
TO COAGULANT AID DOSING PUMP
QWB-006-0502
TO COAGULANT DOSING PUMP
QWB-006-0502
TO LIQUID CHELATING DOSING PUMP
QWB-006-0502
WN103-50-AP1
FROM REUSE WATER ROOF TANK
QWB-006-0503
UU708-25-AP3
FROM SLUDGE THICKNER A /1 /2
QWB-006-0501
WN4-520-100-AP1
FROM BELT FILTER
QWB-006-0501
WN521-100-AP1
AIR
WN1001-1203
AERATOR OF EQUALIZATION TANK A
WN1061-1203
EQUALIZATION TANK A
WN1101/1201-1203
INFLUENT WASTE WATER PUMP A /1/2
FROM COAGULANT AID DOSING PUMP
QWB-006-0502
FROM COAGULANT DOSING PUMP
QWB-006-0502
FROM LIQUID CHELATING DOSING PUMP
QWB-006-0502
FROM NaOH DOSING PUMP
QWB-006-0502
FROM H2SO4 DOSING PUMP
QWB-006-0502
TO NaOH DOSING PUMP
QWB-006-0502
TO H2SO4 DOSING PUMP
QWB-006-0502
WN103-80-AP1
WN3001-1203
MIXER OF pH ADJUSTMENT TANK A
WN3301-1203
pH ADJUSTMENT TANK A
WN4101-1203
MIXER OF RAPID MIXING TANK
WN3201/3301-1203
MIXER
WN3281/3581-1203
FLOCCULATION TANK A /1/2
WN4181-1203
RAPID MIXING TANK A
WN4101-1203
SLUDGE COLLECTORS OF PRIMARY SETTLING TANK A /1
WN4181-1203
PRIMARY SETTLING TANK A /1
WN4201-1203
SLUDGE COLLECTORS OF PRIMARY SETTLING TANK A /2
WN4281-1203
PRIMARY SETTLING TANK A /2
WN104-80-AP1
WN105-100-AP1
WN501-80-AP1
WN503-100-AP1
WN505-80-AP1
WN6001-1203
MIXER OF NEUTRALIZATION TANK A
WN6081-1203
NEUTRALIZATION TANK A
FROM NaOH DOSING PUMP
QWB-006-0502
FROM H2SO4 DOSING PUMP
QWB-006-0502
TO NaOH DOSING PUMP
QWB-006-0502
TO H2SO4 DOSING PUMP
QWB-006-0502
TO EQUALIZATION TANK B
QWB-006-0500
WN6004-50-AP2
TRENCH
TO NaOCl DOSING PUMP
QWB-006-0502
FROM SLUDGE MIXING TANK LEVEL
QWB-006-0501
WN6502-80-AP1
TO SLUDGE MIXING TANK
QWB-006-0501
TO FLY ASH SOLIDIFICATION SYSTEM
WN4573-80-AP1
FROM REUSE WATER ROOF TANK
QWB-006-0503
WN4301/4401-1203
WASTE SLUDGE PUMP A /1/2
WN0801-1203
OIL SKIMMER B
WN4581-1203
SCUM SKIMMER B
FROM SEPTIC TANK
FROM VEHICLE WASHING FACILITY
FROM WEIGH BRIDGE
WN0881-1203
BAR/FINE SCREEN B
WN0781-1203
INFLUENT CHAMBER B
WN9508-50-AP1
WN4302-80-AP1
WN2001/2101/2201/2301-1203
AERATOR OF AERATION TANK B /1/2/3/4
WN2081-1203
AERATION TANK B
WN1881-1203
DISTRIBUTION TANK B
WN4131-1203
SECONDARY SETTLING TANK B /1
WN4231-1203
SECONDARY SETTLING TANK B /2
WN4131-1203
SLUDGE COLLECTORS OF SECONDARY SETTLING TANK B /1
WN4231-1203
SLUDGE COLLECTORS OF SECONDARY SETTLING TANK B /2
WN0901/1001-1203
AERATOR OF EQUALIZATION TANK B /1/ /2
WN1081-1203
EQUALIZATION TANK B
WN1101/1201-1203
INFLUENT WASTE WATER PUMP B /1/2
WN307-80-AP1
WN304-100-AP1
WN305-100-AP1
WN306-80-AP1
WN308-50-AP1
WN4301/4401-1203
RETURN SLUDGE PUMP B /2-1/2-2
FROM RETURN SLUDGE PUMP B/1
QWB-006-0501
WN502-80-AP1
FROM RETURN SLUDGE TANK LEVEL
QWB-006-0501
TO RETURN SLUDGE TANK
QWB-006-0501
WN505-80-AP1
FROM REUSE WATER ROOF TANK
QWB-006-0503
UU709-15-AP3
TO SLUDGE HOLDING TANK
QWB-006-0501
WN503-100-AP1
FROM NEUTRALIZATION TANK A
QWB-006-0500
WN4108-100-AP1
TO RETURN SLUDGE PUMP B /1
QWB-006-0501
TO NaOCl DOSING PUMP
QWB-006-0502
WN7081-1203
PUMP TANK B
WN909-50-AP1
WN7101/7201-1203
SAND FILTER FEEDING PUMP B /1/2
WN8181-1203
SAND FILTER B /1
WN8281-1203
SAND FILTER B /2
FROM NaOCl DOSING PUMP
QWB-006-0502
WN310-100-AP1
WN311-80-AP1
WN8581-1203
CHLORINE CONTACT TANK
WN9081-1203
REUSE WATER STORAGE TANK
WN9101/9201-1203
REUSE WATER SUPPLY PUMP /1/2
FROM SERVICE AIR
QWB-006-0503
FROM REUSE WATER ROOF TANK LEVEL
QWB-003-6328
TO REUSE WATER ROOF TANK
QWB-003-6328
WN311-80-AP3
DISCHARGE TO MANHOLE OF LUKSEN INDUSTRIAL PARK SEWER SYSTEM
FROM REUSE WATER ROOF TANK
QWB-006-0503
UU718-25-AP3
FOR CONSTRUCTION
APPROVED
SINOTECH ENGINEERING CONSULTANTS, LTD.
This drawing was approved by the Engineer on 92.4.2 per Letter LUS-SP-MHE-616
17.Apr.'03 Issued for construction in accordance with SEC letter ref LUS-SP-MHI-626
NO. DATE DESCRIPTION BY CHKD APRD
行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠建造統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189
ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.3 DESIGNING SECTION
APPROVED K. Fujita
CHECKED H. Okada
DESIGNED T. Hayanuki
DRAWN Y. Aizawa
SCALE
MHI PROJECT NO. 32221
TITLE P&I W.W.T.P. (1/4) (WASTE WATER)
CLIENT DWG NO. 4817C-01-01-147
MHI DWG NO. QWB-006-0500
MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS
REV. NO.
DRAWN ISSUED
-QSOOwWTP.dwg

APPROVED

THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT

SINOTECH ENGINEERING CONSULTANTS, LTD.

BY ... DATE 92.4.29

this drawing was approved by the Engineer on 92.6.1 per Letter LTS-SL-MHE-821

FOR CONSTRUCTION

FROM INFLUENT CHAMBER 9/ SECONDARY SETTING TANK AND PRIMARY SETTING TANK SCUM
QWB-006-0500 WM503-100-AP1

FROM NaOCl DOSING PUMP
QWB-006-0502 UE909-15-AP1

FROM PRIMARY SETTLING TANK
QWB-006-0500 WM502-80-AP1

FROM REUSE WATER ROOF TANK
QWB-006-0503 UU711-15-AP1

FROM RETURN SLUDGE PUMP B/2
QWB-006-0500 WM505-80-AP1

FROM PUMP TANK B LEVEL
QWB-006-0500

...STRIBUTION TANK
QWB-006-0500 WM509-80-AP1

WL5501/5601-1203
RETURN SLUDGE PUMP B /1-1/1-2

FROM REUSE WATER ROOF TANK
QWB-006-0503

TO NaOCl DOSING PUMP
QWB-006-0502

ODOR TREATMENT SYSTEM

WL6001-1203
MIXER OF SLUDGE MIXING TANK

WL6081-1203
SLUDGE MIXING TANK

WM512-80-AP1

TRENCH

WL6101/6201-1203
SLUDGE TRANSFER PUMP /1/2

WM511-80-AP1

ODOR TREATMENT SYSTEM

WL5081-1203
RETURN SLUDGE TANK

WL5101/5201-1203
WASTE SLUDGE PUMP D /1/2

TO EQUALIZATION TANK A
QWB-006-0500 WM520-100-AP1

ODOR TREATMENT SYSTEM

WL1101-1203
SLUDGE COLLECTORS OF SLUDGE THICKENER D /1

WL1181-1203
SLUDGE THICKENER D /1

TRENCH

WL2101/2201-1203
THICKENED SLUDGE PUMP D /1/ /2

WM513-80-AP1

ODOR TREATMENT SYSTEM

WL1201-1203
SLUDGE COLLECTORS OF SLUDGE THICKENER D /2

WL1281-1203
SLUDGE THICKENER D /2

TRENCH

WL2301/2401-1203
THICKENED SLUDGE PUMP D /3/ /4

WM517-80-AP1

UU707-15-AP3

UU708-15-AP3

ODOR TREATMENT SYSTEM

WL4001-1203
MIXER OF SLUDGE HOLDING TANK

WL4081-1203
SLUDGE HOLDING TANK

TRENCH

WL4101/4201-1203
SLUDGE FEEDING PUMP /1/2

TO POLYMER DOSING PUMP
QWB-006-0502

TO EQUALIZATION TANK A
QWB-006-0500 WM521-100-AP1

TO REFUSE BUNKER
QWB-003-0527

WM522-80-AP1

FROM POLYMER DOSING PUMP /2
QWB-006-0502

UE905-25-AP1

FROM POLYMER DOSING PUMP /1
QWB-006-0502

UE901-25-AP1

ODOR TREATMENT SYSTEM

WM703-250-AP1

FROM INSTRUMENT AIR
QWB-006-0503

UU914-25-AS1

WL7101-1203
BELT FILTER /1

UU724-25-AP3

FROM REUSE WATER ROOF TANK
QWB-006-0503

UU702-40-AP3

WL7701-1203
BELT FILTER /2

WL8091-1203
CAKE BUNKER

WL7501-1203
CAKE CONVEYOR

UU715-15-AP3

FROM REUSE WATER ROOF TANK
QWB-006-0503

UU707-15-AP3

FROM REUSE WATER ROOF TANK
QWB-006-0503

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
2	17.Apr.'03	Issued for construction in accordance with SEC letter ref LIS-SP-MHI-626	Sid	Y.O	K.F

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

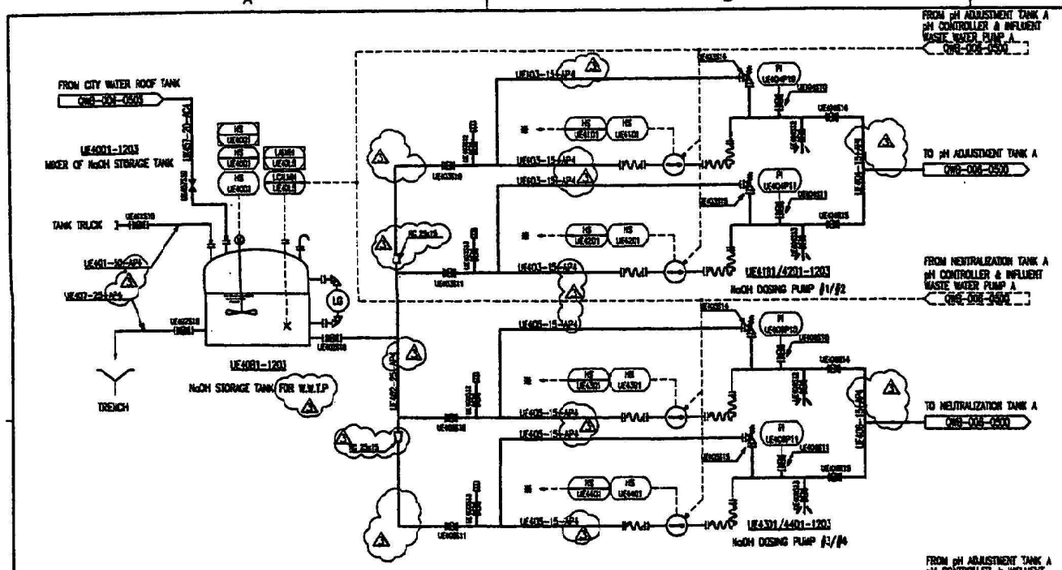
ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.3 DESIGNING SECTION	TITLE: P&I W.W.T.P. (2/4) (SLUDGE)
APPROVED K.Fujita	
CHECKED K.Shindo	
DESIGNED T.Nagatsuka	
DRAWN Y.Ogawa	CLIENT DWG NO. 4817C-01-01-148
SCALE ~	
MHI PROJECT NO. 32221	MHI DWG NO. QWB-006-0501

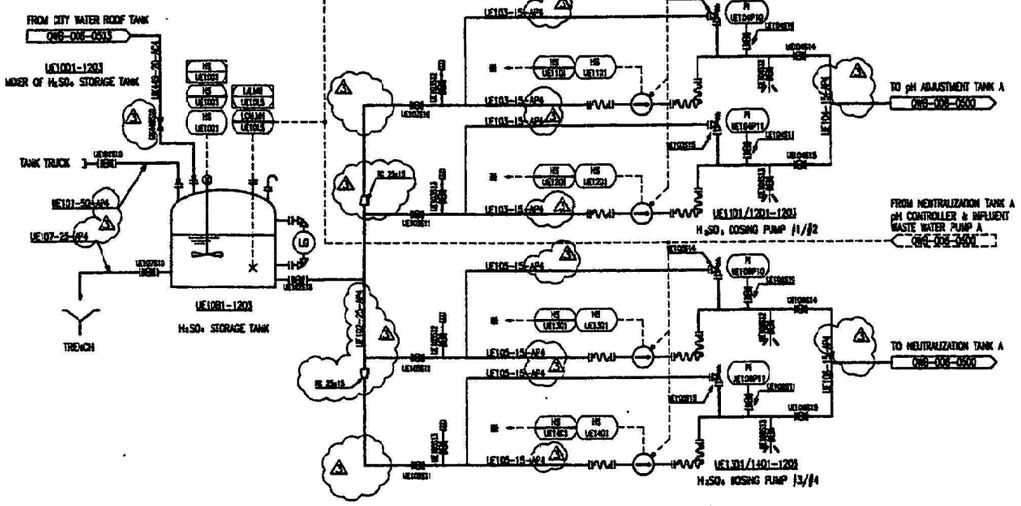
MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

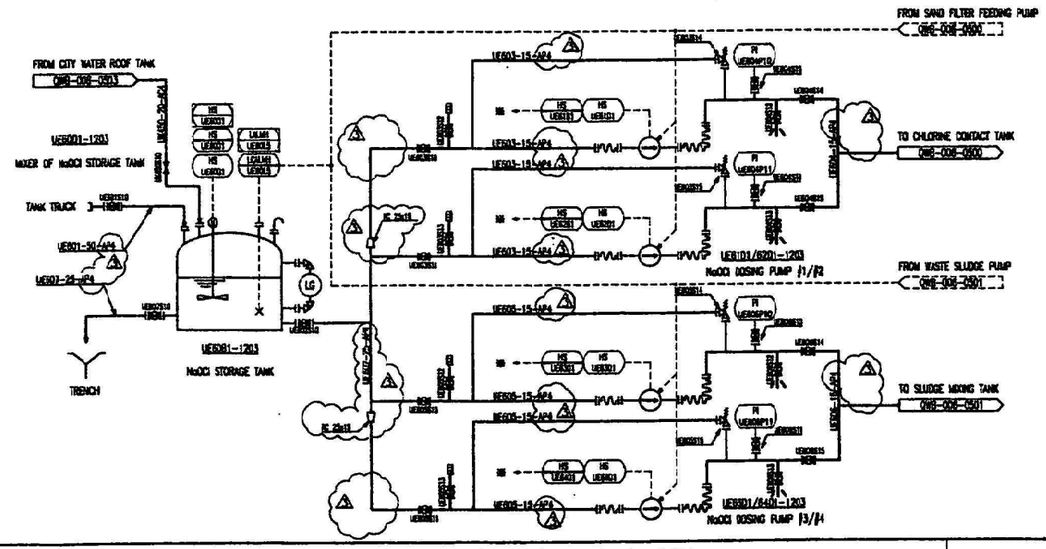
REV NO. 2

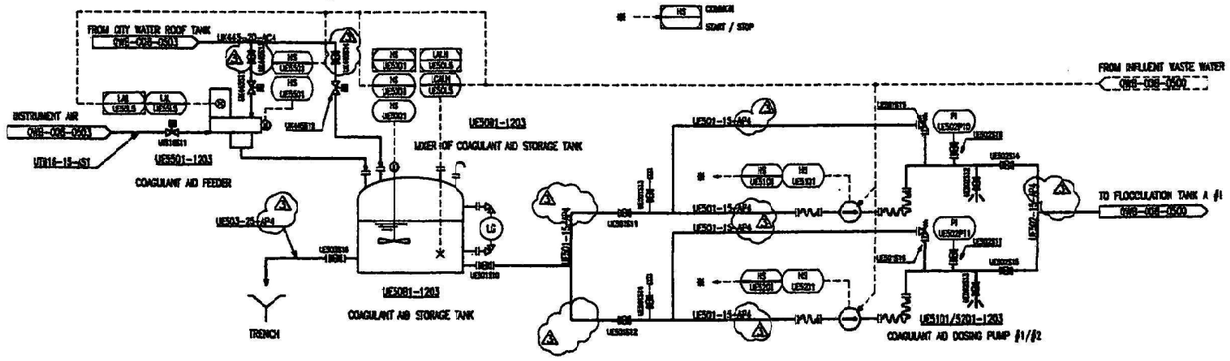
DRAWN ISSUED

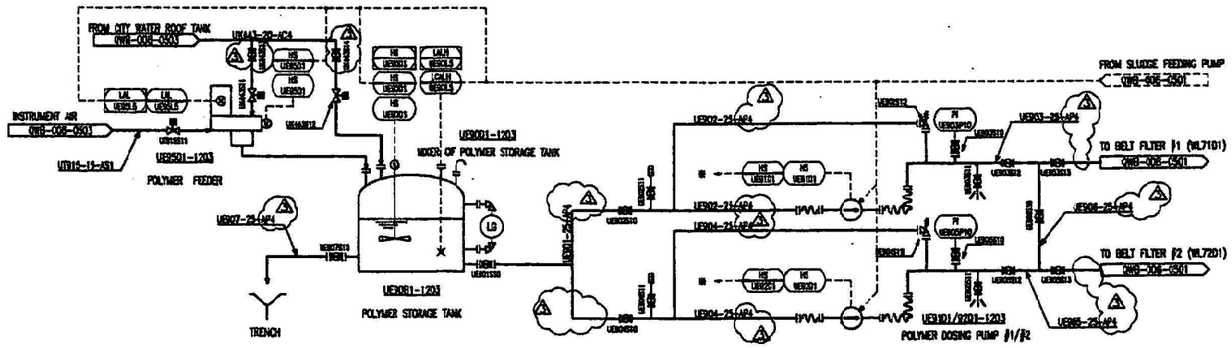
P&I01WWTP.dwg

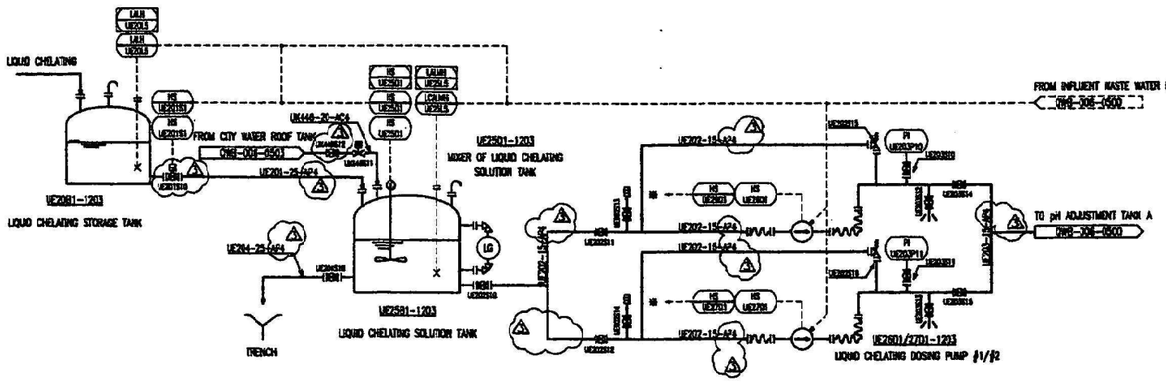


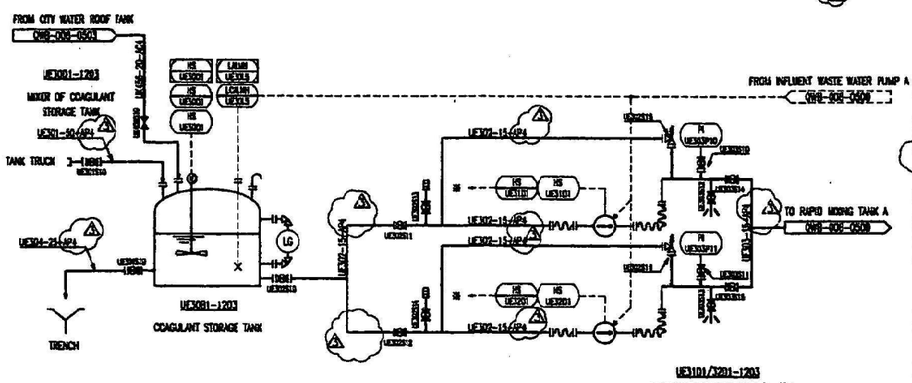












NO.	DATE	DESCRIPTION	BY	CHKD	APPRD
4	4 Jun.'03	Revised	TM	JO	KF
3	23 Jan.'03	Revised	T.K	K.S	K.F
2	21 Oct.'02	Totally Revised	T.K	K.S	K.F

● 行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠機械統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.3 DESIGNING SECTION
APPROVED K. Fujita
CHECKED K. Okada
DESIGNED T. Nagasaka
DRAWN Y. Ogawa
SCALE
MHI PROJECT NO. 32221

TITLE: P&I W.W.T.P. (3/4) (CHEMICAL)
CLIENT DWG NO. 4817C-01-01-149
MHI DWG NO. QWB-006-0502
REV. NO. 4

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA SHIPYARD & MACHINERY WORKS
DRAWN ISSUED

This drawing was approved by the Engineer on 12.4.2 per Letter LTC-9-WW-626

FOR CONSTRUCTION

TO REFUSE BUNKER
FROM SERVICE AIR
FROM INSTRUMENT AIR
FROM REUSE WATER ROOF TANK
FROM CITY WATER ROOF TANK
SAND FILTER
W.W.T.P EXHAUST FAN #1/#2
BELT FILTER #1/#2
AERATOR OF EQUALIZATION TANK A
EQUALIZATION TANK A
MIXER OF SLUDGE HOLDING TANK
SLUDGE HOLDING TANK
RETURN SLUDGE TANK
MIXER OF SLUDGE MIXING TANK
SLUDGE MIXING TANK
SLUDGE THICKENER D #1
SLUDGE THICKENER D #2
SLUDGE COLLECTOR OF SLUDGE THICKENER D #1
SLUDGE COLLECTOR OF SLUDGE THICKENER D #2
AERATOR OF AERATION TANK B #1/#2
AERATION TANK B
AERATOR OF AERATION TANK B #3/#4
EQUALIZATION TANK B
AERATOR OF EQUALIZATION TANK B #1/#2
SLUDGE COLLECTORS OF SECONDARY SETTLING TANK B #1
SLUDGE COLLECTORS OF SECONDARY SETTLING TANK B #2
SECONDARY SETTING TANK B #1
SECONDARY SETTING TANK B #2
SLUDGE DEWATER ROOM
2FL +1000
1FL +5000
1FL +1000
1FL +5300
1FL ±0
1FL +4200
BELT FILTER
THICKENED SLUDGE PUMP B#1/2
THICKENED SLUDGE PUMP B#3/4
WASTE SLUDGE PUMP A
SLUDGE TRANSFER PUMP
RETURN SLUDGE TANK
WASTE SLUDGE PUMP D
RETURN SLUDGE PUMP B#1
SLUDGE FEEDING PUMP
EQUALIZATION TANK A
CHLORINE CONTACT TANK
EQUALIZATION TANK B
POLYMER FEEDER AND POLYMER STORAGE TANK
H_2SO_4 STORAGE TANK
COAGULANT AID FEEDER AND COAGULANT AID STORAGE TANK
NaOCL STORAGE TANK
COAGULANT STORAGE TANK
NaOH STORAGE TANK
LIQUID CHELATING SOLUTION TANK
BELT FILTER . CAKE BUNKER
POLYMER FEEDER
pH ADJUSTMENT TANK A pH METER
NEUTRALIZATION TANK A pH METER
COAGULANT AID FEEDER

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY [signature] DATE 92.5.9

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
2	17.Apr.'03	Issued for construction in accordance with SEC letter ref LIS-SP-MH-626	[signature]	[signature]	[signature]

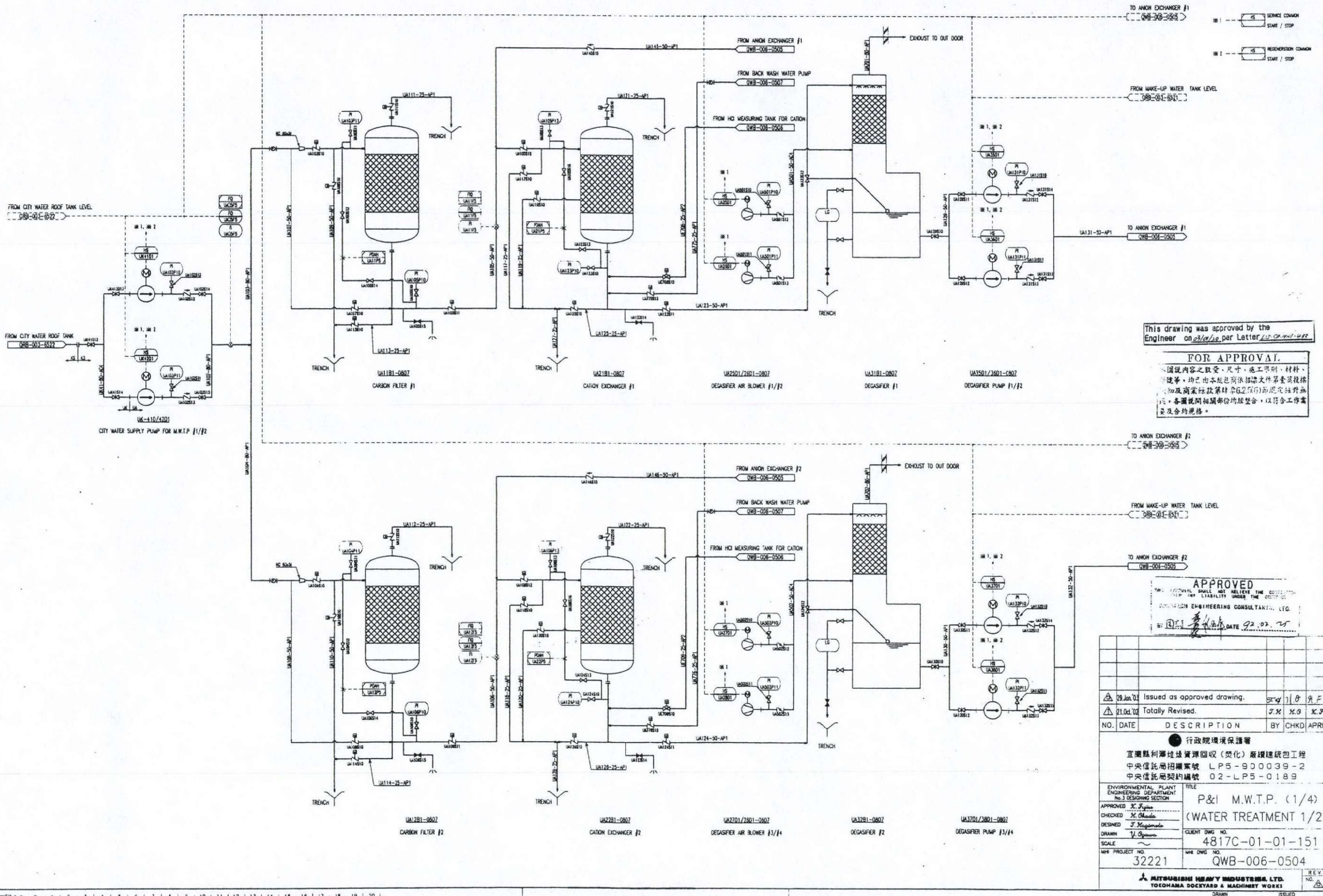
行政院環境保護署
宜蘭縣利澤垃圾資源回收(焚化)廠續建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION

APPROVED	K. Fujita
CHECKED	K. Okada
DESIGNED	T. Nagaoka
DRAWN	Y. Ogawa
SCALE	~
MHI PROJECT NO.	32221

TITLE: P&I W.W.T.P. (4/4) (UTILITY)
CLIENT DWG NO. 4817C-01-01-150
MHI DWG NO. QWB-006-0503

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS
REV. NO. A
DRAWN ISSUED



This drawing was approved by the Engineer on 03/01/30 per Letter LD-CP-MWT-487

FOR APPROVAL

圖說內容之數量、尺寸、施工說明、材料、設備等，均已由本版已附依招標文件第壹篇投標須知及商業條款第肆節第G.2.5(6)項規定註銷無效，各圖說間相關部份均經整合，以符合工作需要及合約規格。

APPROVED

THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT.

DATE 92.07.25

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
2	29.Jan.'03	Issued as approved drawing.	T.Y	Y.O	K.F
1	21.Oct.'02	Totally Revised.	T.Y	Y.O	K.F

行政院環境保護署

宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程

中央信託局招標案號 LP5-900039-2

中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.3 DESIGNING SECTION

APPROVED K. Fujisa
CHECKED K. Okada
DESIGNED T. Kagimoto
DRAWN Y. Ogawa
SCALE ~

TITLE: P&I M.W.T.P. (1/4) (WATER TREATMENT 1/2)

CLIENT DWG NO. 4817C-01-01-151

MHI PROJECT NO. 32221

MHI DWG NO. QWB-006-0504

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS

REV. NO. 2

DRAWN ISSUED

0504MWTP.dwg

TO CATION EXCHANGER #1
QWB-004-0504

FROM NaOH MEASURING TANK FOR ANION
QWB-004-0506
UE808-25-AP1

FROM DEGASIFIER #1
QWB-004-0504
UA131-50-AP1

UA139-25-AP1
UA131P17
UA131S17
UA131S14
UA131S16
UA135-25-AP1
UA137-25-AP1
PDAH UA41PS
UA141P16
UA141S10
UA147S10
UA147-25-AP1
UA141S15
TRENCH
UA41B1-0807
ANION EXCHANGER #1
UA143-15-AP1
AI UA41AS
MCHA UA41AS COM
AAH UA41AS COM
TRENCH

UA777-25-AP1
FROM BACK WASH WATER PUMP
QWB-006-0507
UA145-50-AP1
UA778-25-AP1
UA779-25-AP1
FIQ UA41FS
FIQ UA41PS
FI UA41FS
UA161-50-AP1
UA141-50-AP1
UA141P13
UA141S13
UA141S12
UA145-25-AP1
PDAH UA51PS
UA151S10
UA151S12
UA151S11
UA151S14
UA151S15
UA151S16
UA151-25-AP1
UA165-25-AP1
UA153-25-AP1
UA155-25-AP1
UA153S10
UA155S10
TRENCH
UA504S10
UA504-50-HC4
UA504S11
UA505S11
UE710-25-AP2
FROM HCl MEASURING TANK FOR MIXED-BED
QWB-006-0508
UA157P10
UA157S10
UA157S11
UA157-50-AP1
UA163-25-AP1
UA163S13
TRENCH
UA51B1-0807
MIXED-BED EXCHANGER #1
UA159-15-AP1
AAH UA53AS
AAH UA53AS
TRENCH
UA51A5
MCHA UA51AS COM
AAH UA51AS COM
UA51F5
FIQ UA51F5
FIQ UA51F5

FROM NaOH MEASURING TANK FOR MIXED-BED
QWB-006-0506
UE812-25-AP1
UA506-50-HC4
TO NEUTRALIZATION TANK
QWB-006-0507
※2 HS REGENERATION COMMON START / STOP
RC 80x50
UA167-80-AP1
UA60-80-AS1
TO MAKE-UP WATER TANK
QRB-003-6521
AI UA60A5 pH
AI UA60A5 pH
UA168-25-AP1
TRENCH
※2
UA503P12
UA503S12
UA503S14
UA503S16
HS UA5501
UA503-50-HC4
UA503P13
UA503S13
UA503S15
UA503S11
※2
UA5501/5601-0807
MIXING BLOWER #1/#2
TO BACK WASH WATER PUMP
QWB-006-0507

FROM DEGASIFIER PUMP #1/#2
QWB-004-0504
TO CATION EXCHANGER #2
QWB-004-0504
FROM NaOH MEASURING TANK FOR ANION
QWB-004-0506
UE809-25-AP1
FROM DEGASIFIER #2
QWB-004-0504
UA132-50-AP1
UA140-25-AP1
UA132P17
UA132S17
UA132S14
UA132S16
UA136-25-AP1
UA138-25-AP1
PDAH UA42PS
UA142P16
UA142S10
UA144S10
UA148-25-AP1
UA142S15
TRENCH
UA42B1-0807
ANION EXCHANGER #2
UA144-15-AP1
AI UA42AS
MCHA UA42AS COM
AAH UA42AS COM
TRENCH

UA780-25-AP1
FROM BACK WASH WATER PUMP
QWB-006-0507
UA146-50-AP1
UA782-25-AP1
UA783-25-AP1
FIQ UA42FS
FIQ UA42PS
FI UA42FS
UA162-50-AP1
UA142-50-AP1
UA142P13
UA142S13
UA142S12
UA152-25-AP1
UA156-25-AP1
UA130-25-AP1
PDAH UA52PS
UA152S10
UA152S12
UA152S11
UA152S14
UA152S15
UA152S16
UA154-25-AP1
UA156-25-AP1
UA154S10
UA156S10
TRENCH
UA505S10
UA505-50-HC4
UA505S11
UA506S11
UE711-25-AP2
FROM HCl MEASURING TANK FOR MIXED-BED
QWB-006-0508
UA158P10
UA158S10
UA158S11
UA158-50-AP1
UA164-25-AP1
UA164S13
TRENCH
UA52B1-0807
MIXED-BED EXCHANGER #2
UA160-15-AP1
AAH UA54AS
AAH UA54AS
TRENCH
UA52A5
MCHA UA52AS COM
AAH UA52AS COM
UA52F5
FIQ UA52F5
FIQ UA52F5

FROM NaOH MEASURING TANK FOR MIXED-BED
QWB-006-0506
UE811-25-AP1
TO BACK WASH WATER PUMP
QWB-006-0507

FROM DEGASIFIER PUMP #3/#4
QWB-004-0504

APPROVED
APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT.
ISHIKAWAJIMA-HARIMA ENGINEERING CONSULTANTS CO., LTD.
DATE 97.03.25

This drawing was approved by the Engineer on 97/01/30 per Letter WJ-SA-MHI-427

FOR APPROVAL
本圖說內容之數量、尺寸、施工準則、材料、型號等，均已由本廠在商依招標文件第壹冊投標須知及商業條款第肆章6.2.5(6)節規定核對無誤，各圖就同相關部份均組整合，以符合工作需要及合約規格。

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
2	29.Jan.'03	Issued as approved drawing.	Y.K	M.O	K.F
1	21.Oct.'02	Totally Revised.	Y.K	M.O	K.F

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.3 DESIGNING SECTION
APPROVED K. Fujita
CHECKED M. Okada
DESIGNED T. Nagimoto
DRAWN Y. Ogawa
SCALE ~
MHI PROJECT NO. 32221

TITLE
P&I M.W.T.P. (2/4)
(WATER TREATMENT 2/2)
CLIENT DWG NO. 4817C-01-01-152
MHI DWG NO. QWB-006-0505
REV. NO. 2

MITSUBISHI HEAVY INDUSTRIES, LTD.
YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN
ISSUED 97.3.25

0505MWTP.dwg

UE715-50-AP2
UE714-80-AP2
UE712-50-AP2
UE710-50-AP2
UE701-50-AP2
TANK TRUCK
UE712-25-AP2
UE702-40-AP1
TRENCH
UE7081-0807
HCl STORAGE TANK
UE7581-0807
HCl GAS ABSORBER
UE719-100-AP2
EXHAUST TO OUT DOOR
UX453-20-HC4
FROM CITY WATER ROOF TANK
QWB-008-0507
UE720-50-AP2
TRENCH
UE701-40-AP2
UE702-40-AP2
UE711-25-AP1
UE705-25-AP2
UE714-25-AP2
UE707-25-AP2
TRENCH
UE7681-0807
HCl MEASURING TANK FOR CATION
TRENCH
UE7681-0807
HCl MEASURING TANK FOR MIXED-BED
FROM BACK WASH WATER PUMP
QWB-008-0507
UA773-25-AP1
UA784-25-AP1
UA781-25-AP1
UE701-50-AP1
TANK TRUCK
UE712-25-AP1
UE702-40-AP1
TRENCH
UE8081-0807
NaOH STORAGE TANK
UE701-40-AP1
UE702-40-AP1
UE711-25-AP1
UE705-25-AP1
UE714-25-AP1
UE707-25-AP1
TRENCH
UE8881-0807
NaOH MEASURING TANK FOR ANION
TRENCH
UE8881-0807
NaOH MEASURING TANK FOR MIXED-BED
FROM BACK WASH WATER PUMP
QWB-008-0507
UA774-25-AP1
UA785-25-AP1
UA786-25-AP1
UE88H-0807
ELECTRIC HEATER FOR REGENERATION #1
UE88H-0807
ELECTRIC HEATER FOR REGENERATION #2

TO NEUTRALIZATION TANK QWB-008-0507
TO CATION EXCHANGER #1 QWB-008-0504
TO CATION EXCHANGER #2 QWB-008-0504
TO MIXED-BED EXCHANGER #1 QWB-008-0505
TO MIXED-BED EXCHANGER #2 QWB-008-0505
TO NEUTRALIZATION TANK QWB-008-0507
TO ANION EXCHANGER #1 QWB-008-0505
TO ANION EXCHANGER #2 QWB-008-0505
TO MIXED BED EXCHANGER #1 QWB-008-0505
TO MIXED BED EXCHANGER #2 QWB-008-0505

NO.	DATE	DESCRIPTION	BY	CHKD	APRD
3	23.Jan.03	Issued as approved drawing.	T.M	Y.O	T.S
2	21.Oct.02	Totally Revised.	T.M	Y.O	T.S

APPROVED
THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY UNDER THE CONTRACT
SINOTECH ENGINEERING CONSULTANTS, LTD.
BY [signature] DATE 02.01.17

This drawing was approved by the Engineer on 01/01/30 per Letter LIS-SP.MHI-437.

FOR APPROVAL
本圖說內容之數量、尺寸、施工準則、材料、型號等，均已由本統包商依招標文件第壹項規格須知及商業條款第肆章6.25(6)節規定檢討無誤，各圖說間相關部份均經整合，以符合工作需要及合約規格。

行政院環境保護署
宜蘭縣利澤垃圾資源回收（焚化）廠興建統包工程
中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

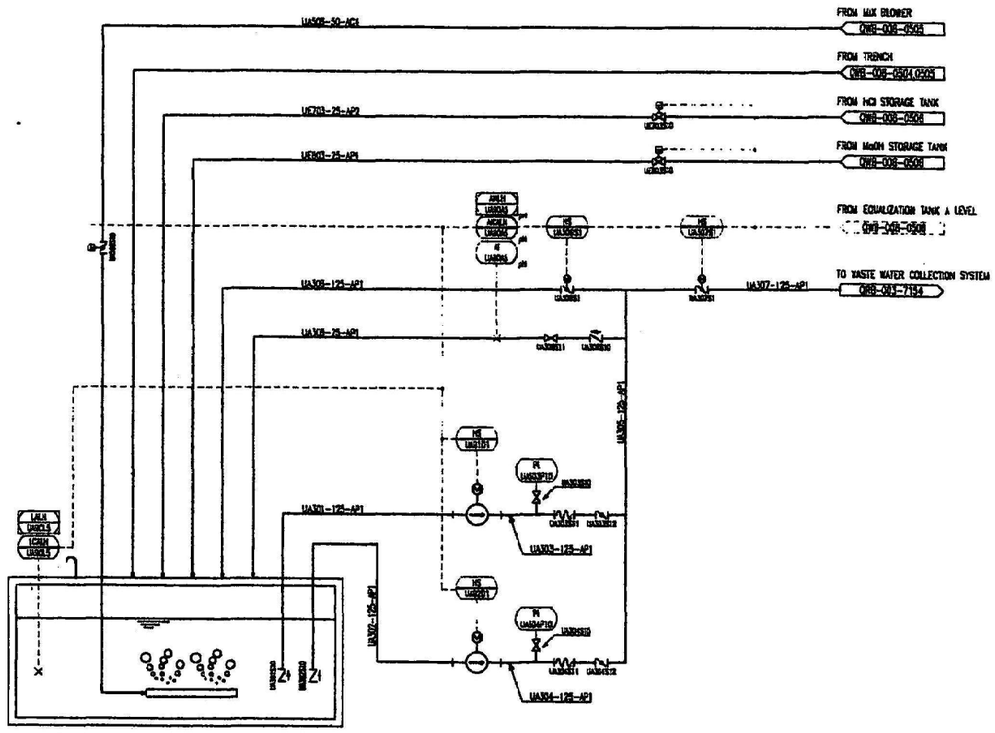
ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.3 DESIGNING SECTION
APPROVED K.Fujita
CHECKED K.Okada
DESIGNED T.Maejima
DRAWN Y.Ogawa
SCALE ～

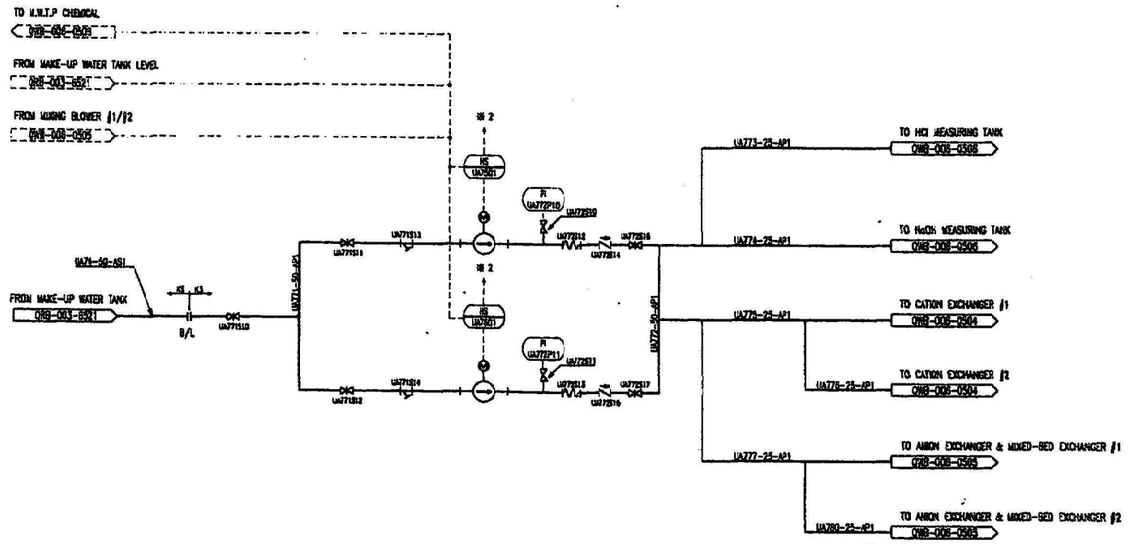
TITLE: P&I M.W.T.P. (3/4) (CHEMICAL)
CLIENT' DWG NO. 4817C-01-01-153
MHI PROJECT NO. 32221
MHI DWG NO. QWB-006-0506
REV. NO. 3

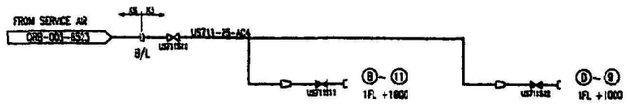
MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA DOCKYARD & MACHINERY WORKS
DRAWN ISSUED

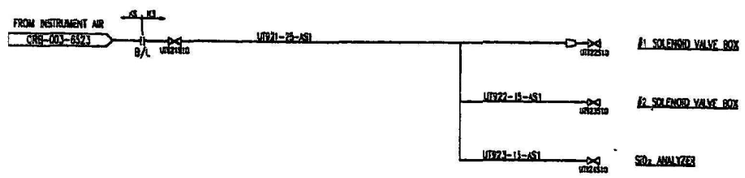
05C36MWTP.dwg

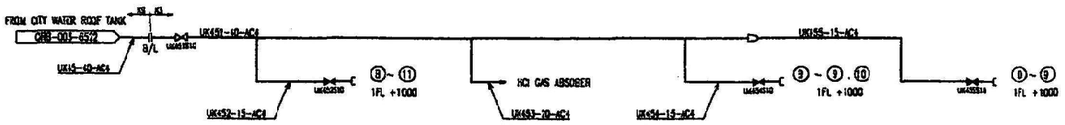
25 90











UA7501/7801-0807
BACK WASH WATER PUMP

APPROVED
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SINOTECH ENGINEERING CONSULTANTS, LTD.
BY DATE 92.01.17

This drawing was approved by the Engineer on 01/01/92 per Letter 02-SP-1001-4923

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NO.	DATE	DESCRIPTION	BY	CHKD	APRD
1	29 Jan.'02	Issued as approved drawing.	T.M	H.O	Y.C
0	21 Dec.'01	Totally Revised.	T.M	H.O	Y.C

行政院環境保護署
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中央信託局招標案號 LP5-900039-2
中央信託局契約編號 02-LP5-0189

ENVIRONMENTAL PLANT ENGINEERING DEPARTMENT No.1 DESIGNING SECTION	TITLE: P&I M.W.T.P. (4/4) (WASTE WATER & UTILITY)
APPROVED Y. Fujita	
CHECKED H. Okada	
DESIGNED T. Haginoshi	CLIENT DWG NO. 4817C-01-01-154
DRAWN Y. Ogawa	
SCALE ~	
MHI PROJECT NO. 32221	MHI DWG NO. QWB-006-0507

MITSUBISHI HEAVY INDUSTRIES, LTD. YOKOHAMA SHIPYARD & MACHINERY WORKS

REV. NO. 1

DRAWN ISSUED

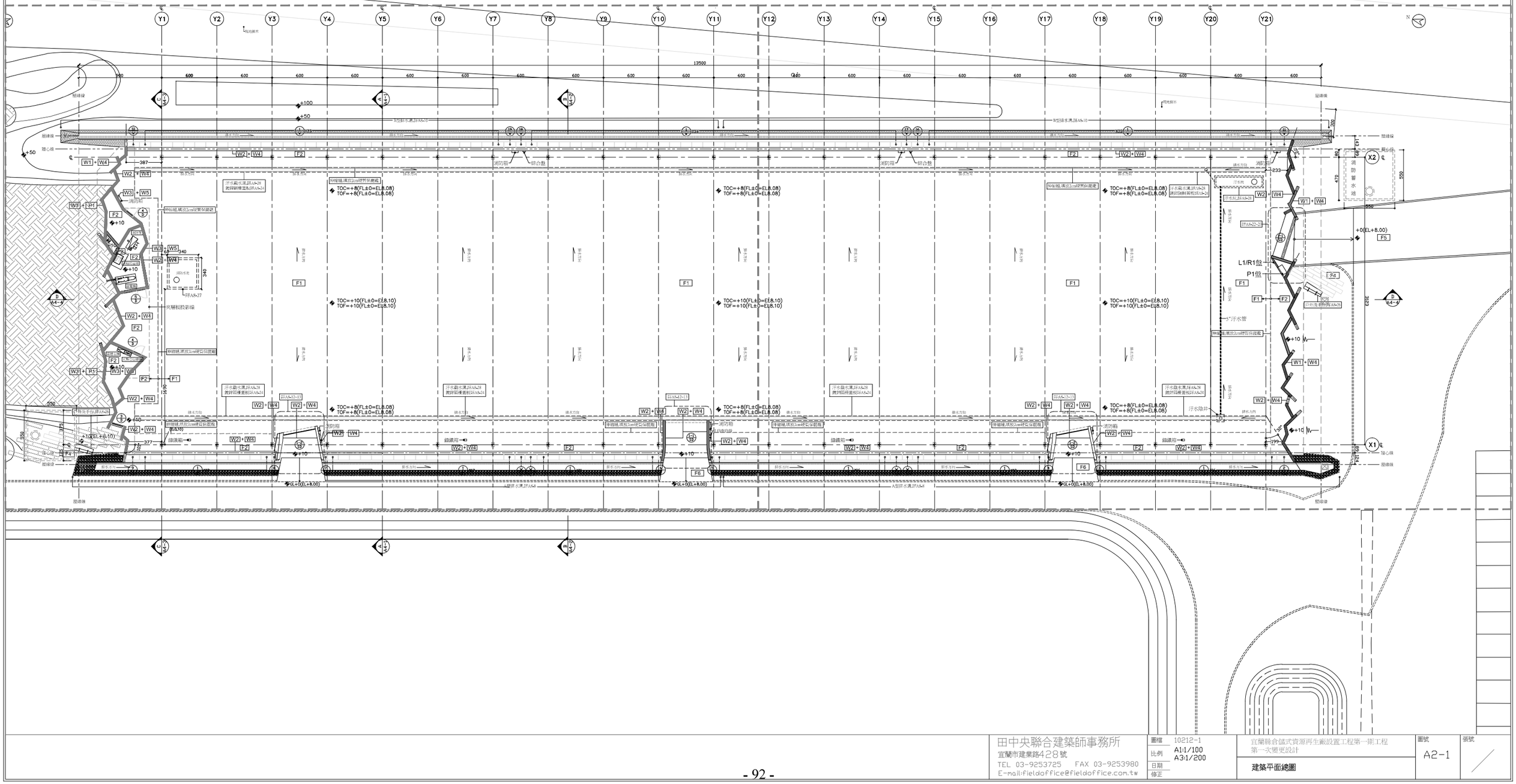
0507MWTP.dwg

26 E 91

Part B　底渣廠建廠工程主要圖說

A2-3

A2-4



田中央聯合建築師事務所
宜蘭市建業路428號
TEL 03-9253725 FAX 03-9253980
E-mail:fieldoffice@fieldoffice.com.tw

圖檔	10212-1
比例	A1:1/100 A3:1/200
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

建築平面總圖

圖號 A2-1

張號

Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8 Y9 Y10 Y11

現地樹木

900 600 600 600 600 600 600 600 600 600 600 600 13500

屋緣線

C A4-3

A A4-1

B A4-2

+100

+50

B型排水溝,詳A8-10

屋緣線

牆心線

+50

W1 + W4

387

W2 + W4

F2

消防箱

綜合盤

排水方向

汙水截水溝,詳A8-28
鍍鋅隔柵蓋板詳A8-24

伸縮縫,填放2cm硬質保麗龍

TOC=+8(FL±0=EL8.08)
TOF=+8(FL±0=EL8.08)

W3 + W5

W3 + P1

消防箱

伸縮縫,填放2cm硬質保麗龍

F2

+10

消防泵

通箱防溢堤

發電機

W3 + W5

60

340

W2 + W4

消防水池

詳A8-27

夾層板投影線

D A4-4

5 D

4 D

F1

TOC=+10(FL±0=EL8.10)
TOF=+10(FL±0=EL8.10)

原插主機

火警受信總機

伸縮縫,填放2cm硬質保麗龍

W3 + P1

W3 + W5

1690

550

戶外洗手台,詳A8-26

3 D

+10(EL+8.10)

375

550

175

377

107

伸縮縫,填放2cm硬質保麗龍
(0,0,10)

鑄鐵箱

F4

牆心線

屋緣線

詳A8-12~13

消防箱
LIC/RIC盤

1-2 SD

1-1 SD

F6

GL+0(EL+8.00)

A型排水溝,詳A8-8

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圖檔 10212-1
比例 A1:1/100 A3:1/200
日期
修正

宜蘭縣合儲式資源再生廠設置工程第一期工程
第一次變更設計

一層平面圖(一)

圖號 A2-3

張號

Y12 Y13 Y14 Y15 Y16 Y17 Y18 Y19 Y20 Y21

600 600 600 600 600 600 600 600 600 600

N

現地樹木

屋緣線

B型排水溝,詳A8-10

300

排水方向

17 W 16 W x33 1 W 11 W

消防箱 綜合盤

F2 W2 + W4

伸縮縫,填放2cm硬質保麗龍

TOC=+8(FL±0=EL8.08)
TOF=+8(FL±0=EL8.08)

汙水截水溝,詳A8-28
鍍鋅隔柵蓋板詳A8-24

汙水坑

汙水坑,詳A8-28

W2 + W4 W1 + W4

詳A8-22~23

1-1 SD

+0(EL+8.00) F5

L1/R1盤

P1盤

F4 F1 F1 F2

戶外洗手台,詳A8-26

5"汙水管

伸縮縫,填放2cm硬質保麗龍

+10

W1 + W4

W2 + W4

汙水陰井

消防箱

鑄鐵箱

1-2 SD

+10

F6

GL+0(EL+8.00)

A型排水溝,詳A8-8

屋緣線 143 89 牆心線 80 X2 消防蓄水池 550 470 550

12° 233

3123

D A4-4

12° 199

X1 牆心線 89 124 屋緣線

=EL8.08)
=EL8.08)

0=EL8.10)
0=EL8.10)

TOC=+10(FL±0=EL8.10)
TOF=+10(FL±0=EL8.10)

詳A8-12~13

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圖檔	10212-1
比例	A1:1/100 A3:1/200
日期	
修正	

宜蘭縣合儀式資源再生廠設置工程第一期工程
第一次變更設計

一層平面圖(二)

圖號 A2-4

張號

N

Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8 Y9 Y10 Y11

900 600 600 600 600 600 600 600 600 600 600 600

13500

C A4-3

A A4-3

B A4-3

+100

+50

+50

X2

W2 + W4

9 D

+325

F4

+330

10 D

W3 + W5

消防箱

21 W

W2 + W5

W1 + W4

+330

F3

夾層玻璃牆,另詳A8-20~21

D A4-4

22 W

W3 + W5

8 D

F4

+330

+325

W2 + W4

W1 + W4

W2 + W4

W2 + W4

W2 + W4

W2 + W4

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圖檔	10212-1
比例	A1:1/100 A3:1/200
日期	
修正	

宜蘭縣合儲式資源再生廠設置工程第一期工程
第一次變更設計

一層夾層平面圖(一)

圖號 A2-5

張號

Y12 Y13 Y14 Y15 Y16 Y17 Y18 Y19 Y20 Y21

600 600 600 600 600 600 600 600 600 600

N

X2

消防蓄水池

W1 + W4

W2 + W4

W1 + W4

F2

D
A4-4

3123

W2 + W4

W1 + W4

20
W

W2 + W5

W2 + W4

X1

田中央聯合建築師事務所 宜蘭市建業路428號 TEL 03-9253725 FAX 03-9253980 E-mail:fieldoffice@fieldoffice.com.tw	圖檔 10212-1 比例 A1:1/100 A3:1/200 日期 修正	宜蘭縣倉儲式資源再生廠設置工程第一期工程 第一次變更設計 一層夾層平面圖(二)	圖號 A2-6	張號

N

Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8 Y9 Y10 Y11

13500

900 600 600 600 600 600 600 600 600 600 600 600

C A4-3

A A4-1

B A4-2

天花鋁鋅鋼板無沖孔範圍 ← → 天花鋁鋅鋼板沖孔(詳A6-2)範圍

D A4-4

RC牆頂線

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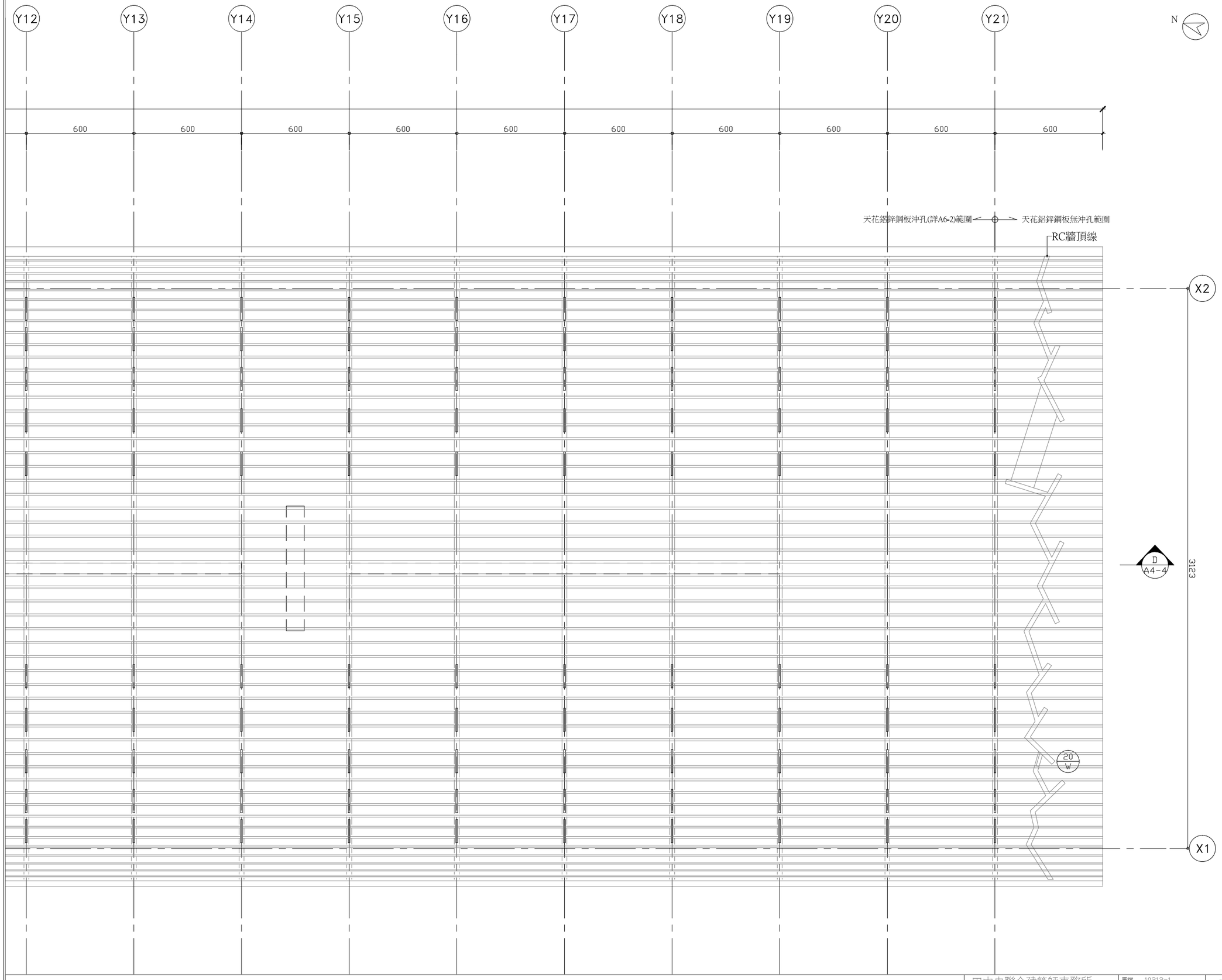
圖檔 10212-1
比例 A1:1/100 A3:1/200
日期
修正

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

反射天花平面圖(一)

圖號 A2-7

張號



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圖檔	10212-1
比例	A1:1/100 A3:1/200
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

反射天花平面圖(二)

圖號 A2-8

張號

N

Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8 Y9 Y10 Y11

13500

900 600 600 600 600 600 600 600 600 600 600 600

C A4-3

A A4-1

B A4-2

231 231 231 231 231 231 231 231

2617

505

209 209 209

D A4-4

+879

R2

R1

屋凸A, 詳A8-14~8-19

天窗, 詳A6-6~8

天窗, 詳A6-6~8

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圖檔	10212-1
比例	A1:1/100 A3:1/200
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

屋頂平面圖(一)

圖號 A2-9

張號

Y12 Y13 Y14 Y15 Y16 Y17 Y18 Y19 Y20 Y21

N

600 600 600 600 600 600 600 600 600 600

231 231 231 231 231 231

X2

R1

R2

屋凸B, 詳A8-14~8-19

+879

天窗, 詳A6-6~8

3123

D
A4-4

209

X1

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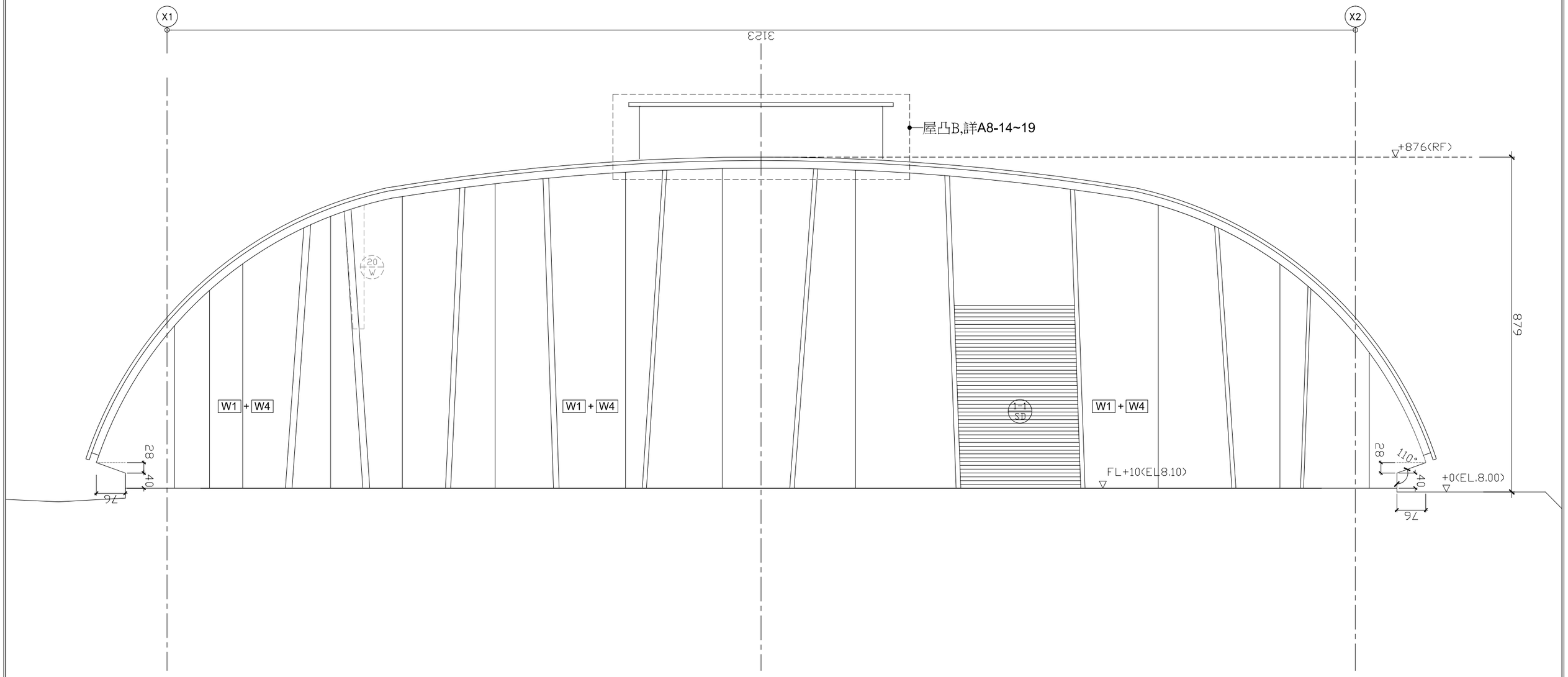
圖檔	10212-1
比例	A1:1/100 A3:1/200
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

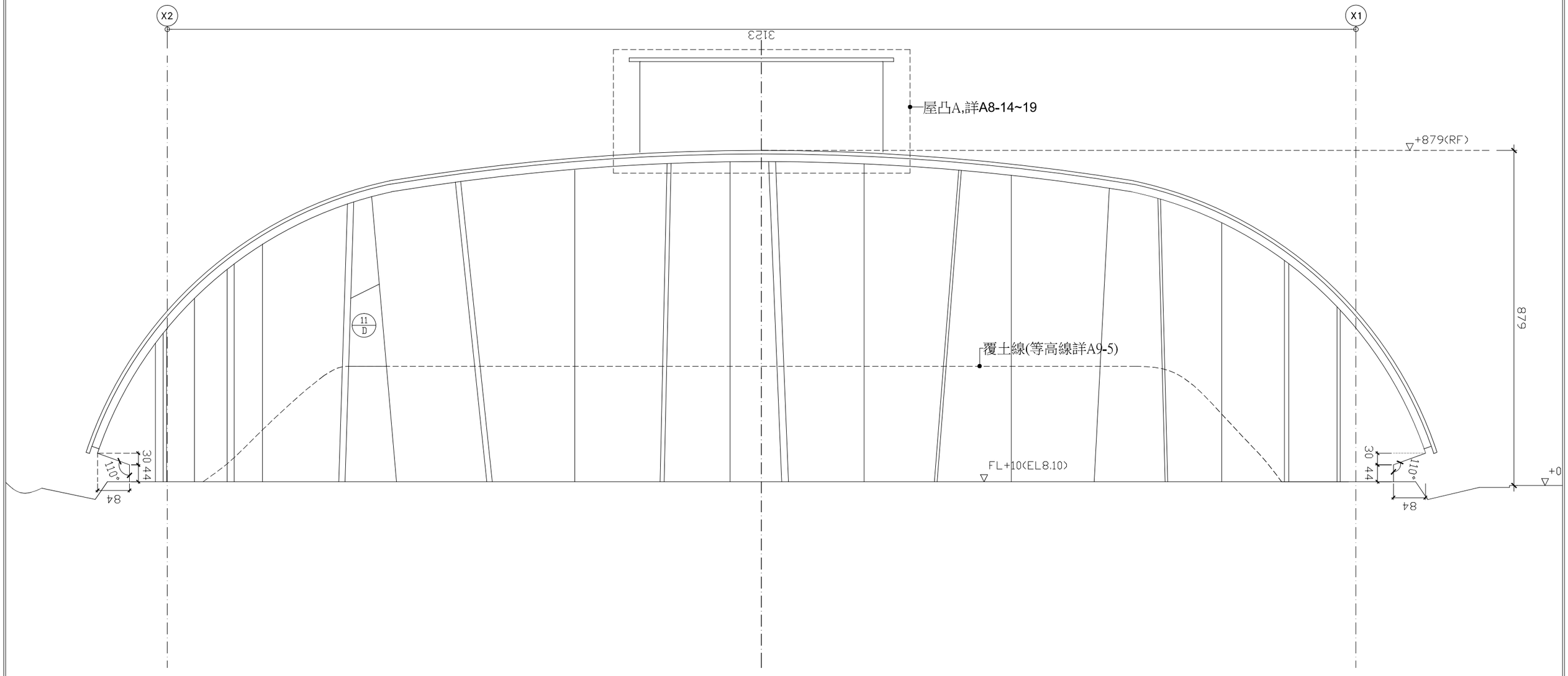
屋頂平面圖(二)

圖號 A2-10

張號



田中央聯合建築師事務所 宜蘭市建業路428號 TEL 03-9253725 FAX 03-9253980 E-mail:fieldoffice@fieldoffice.com.tw	圖檔 10212-1 比例 A1:1/50 A3:1/100 日期 修正	宜蘭縣合儲式資源再生廠設置工程第一期工程 第一次變更設計 南向立面圖	圖號 A3-1 / 張號



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E-mail:fieldoffice@fieldoffice.com.tw

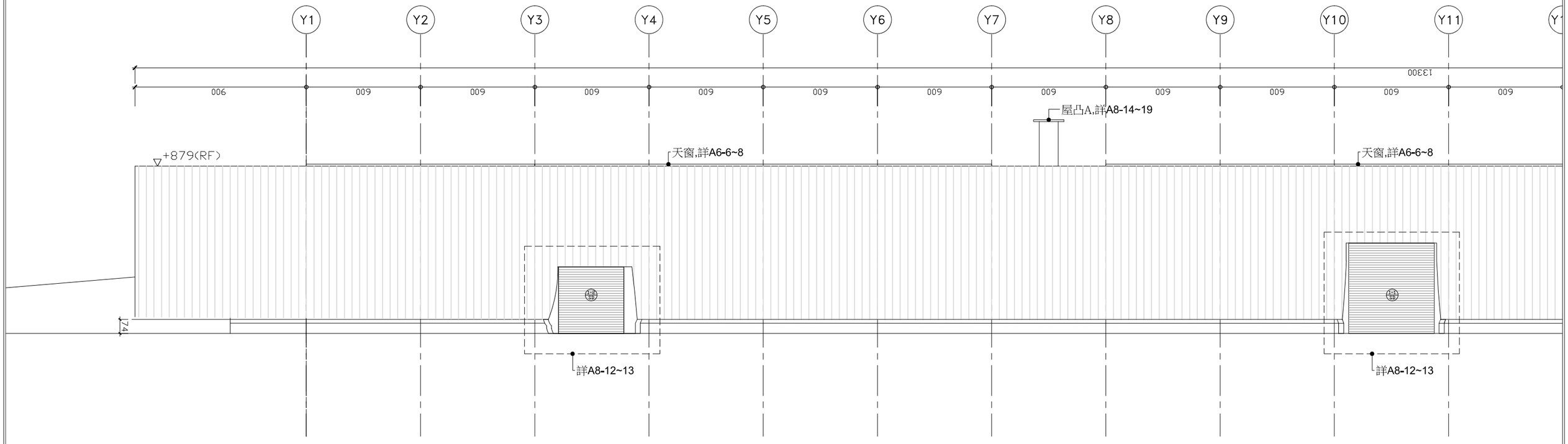
圖檔	10212-1
比例	A1:1/100 A3:1/200
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

北向立面圖

圖號 A3-2

張號



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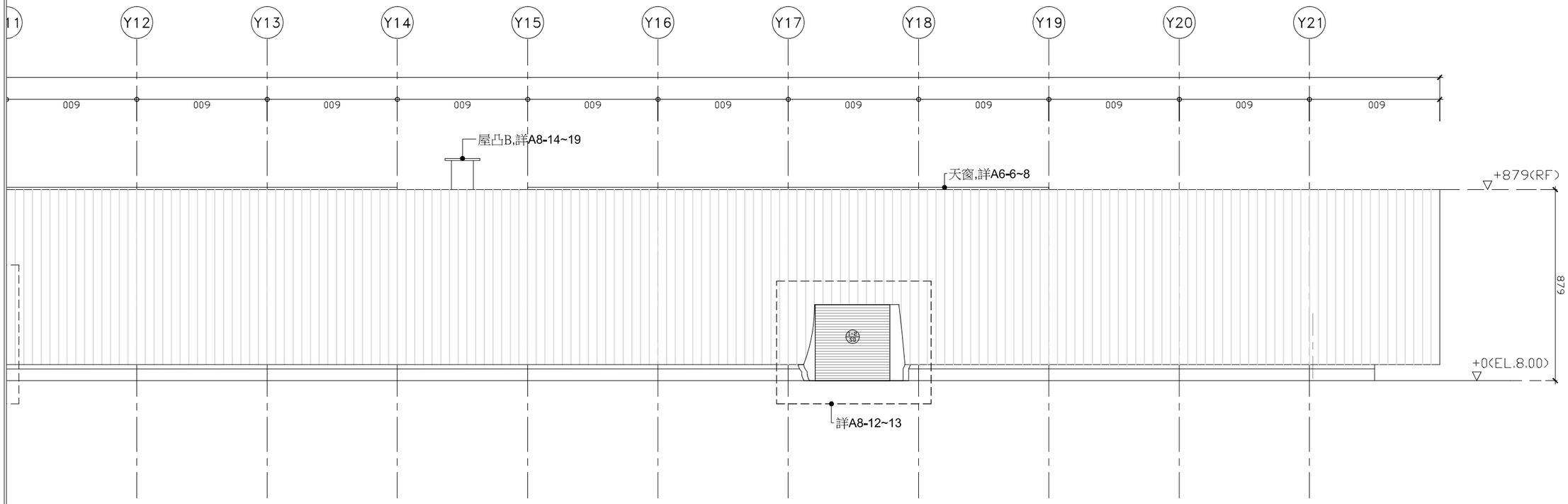
圖檔	10212-1
比例	A1:1/100 A3:1/200
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

西向立面圖(一)

圖號 A3-3

張號



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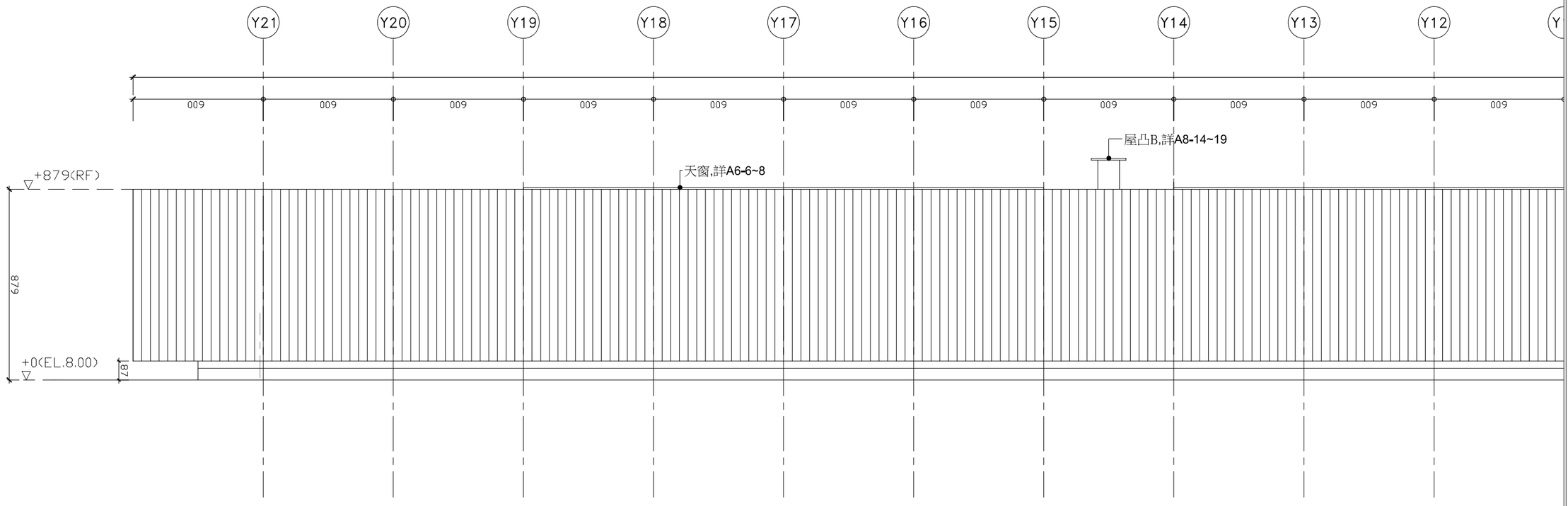
圖檔	10212-1
比例	A1:1/100 A3:1/200
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

西向立面圖(二)

圖號 A3-4

張號



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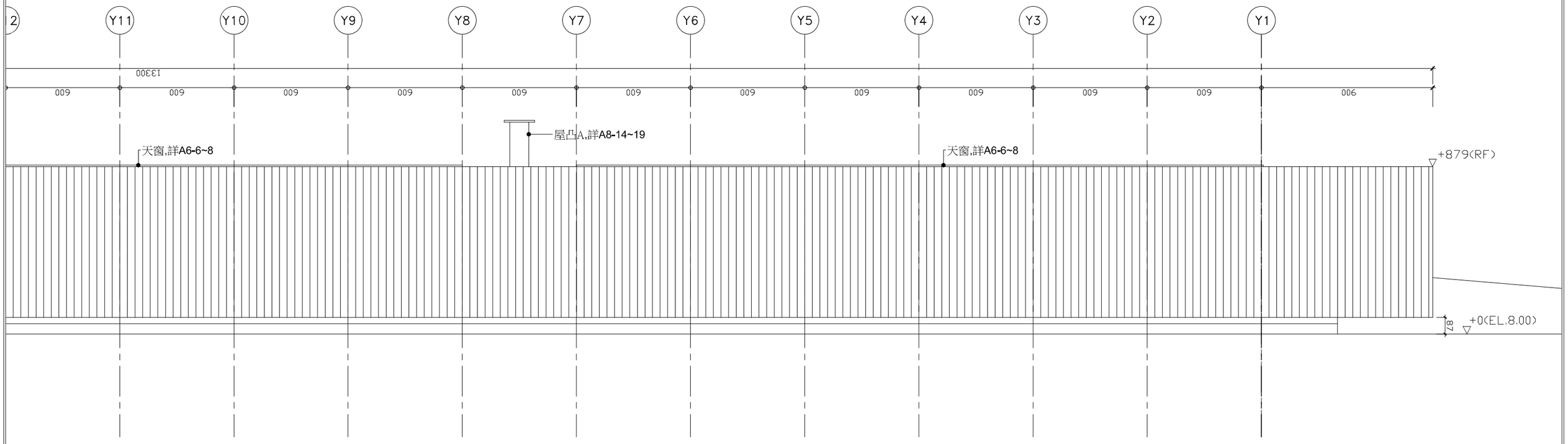
圖檔	10212-1
比例	A1:1/100 A3:1/200
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

東向立面圖(一)

圖號 A3-5

張號



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TEL 03-9253725 FAX 03-9253980
E-mail:fieldoffice@fieldoffice.com.tw

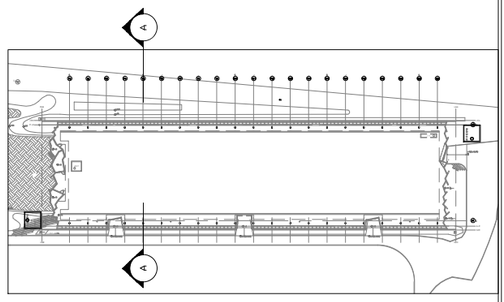
圖檔	10212-1
比例	A1:1/100 A3:1/200
日期	
修正	

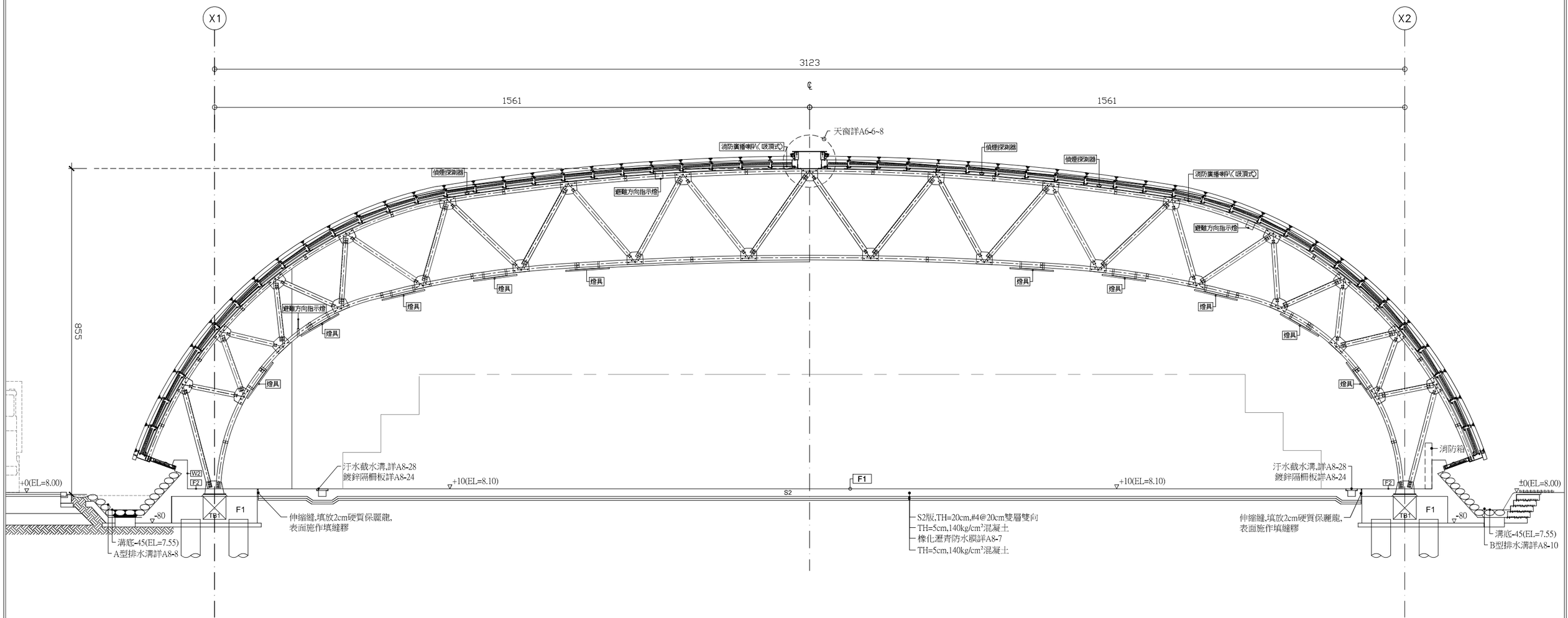
宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

東向立面圖(二)

圖號 A3-6

張號




X1
X2
3123
℄
1561
1561
855
天窗詳A6-6~8
消防廣播喇叭(吸頂式)
偵煙探測器
偵煙探測器
偵煙探測器
消防廣播喇叭(吸頂式)
避難方向指示燈
避難方向指示燈
避難方向指示燈
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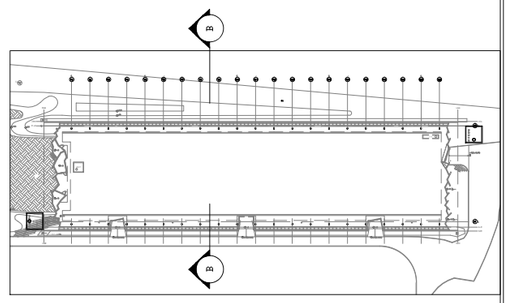
燈具
燈具



X1

X2

3123

℄

1561

1561

屋凸A,詳A8-14~19

屋面板,詳A6-1~4

855

+0(EL8.00)

-80

溝底-45(EL=7.55)

A型排水溝詳A8-8

TB1

汚水截水溝,詳A8-28

鍍鋅隔柵板詳A8-24

+10(EL=8.10)

伸縮縫,填放2cm硬質保麗龍,

表面施作填縫膠

S2

F1

S2版,TH=20cm,#4@20cm雙層雙向

TH=5cm,140kg/cm²混凝土

橡化瀝青防水膜詳A8-7

TH=5cm,140kg/cm²混凝土

+10(EL=8.10)

汚水截水溝,詳A8-28

鍍鋅隔柵板詳A8-24

伸縮縫,填放2cm硬質保麗龍,

表面施作填縫膠

TB1

±0(EL=8.00)

-80

溝底-45(EL=7.55)

B型排水溝詳A8-10

田中央聯合建築師事務所
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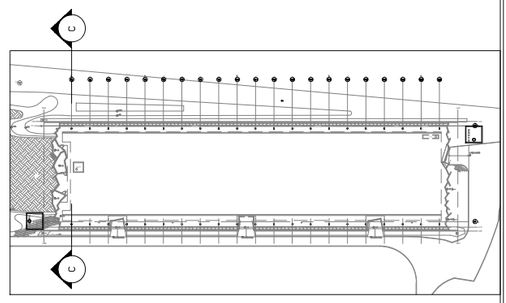
圖檔	10212-1
比例	A1:1/50 A3:1/100
日期	
修正	

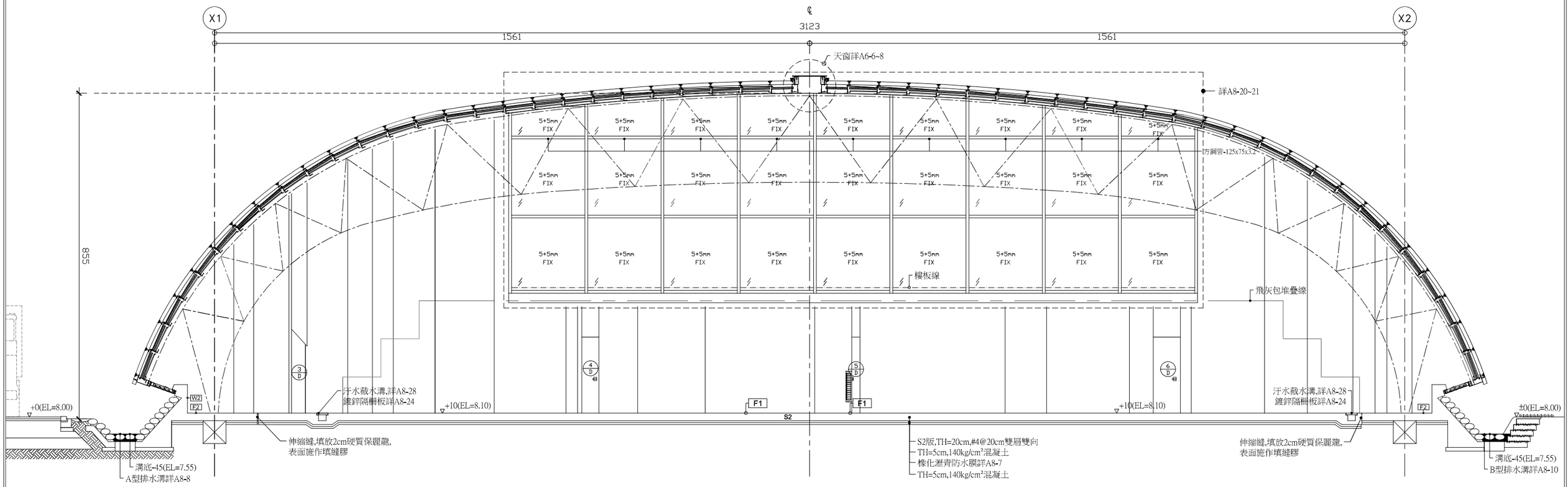
宜蘭縣合儲式資源再生廠設置工程第一期工程
第一次變更設計

B-B′剖面圖

圖號 A4-2

張號 AX





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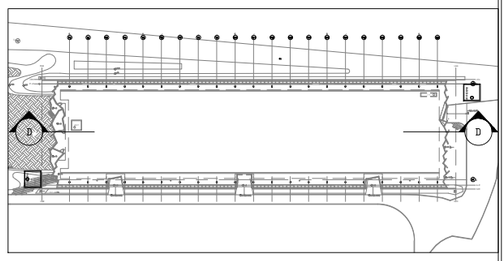
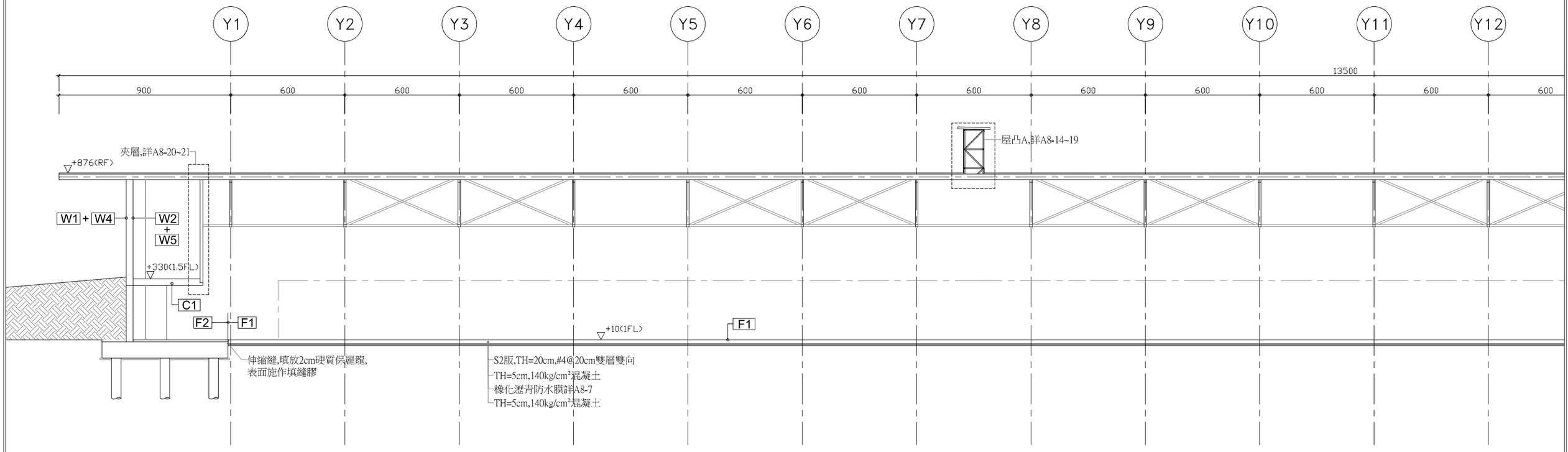
宜蘭縣合儲式資源再生廠設置工程第一期工程
第一次變更設計

C-C′剖面圖

圖號 A4-3

張號 AX





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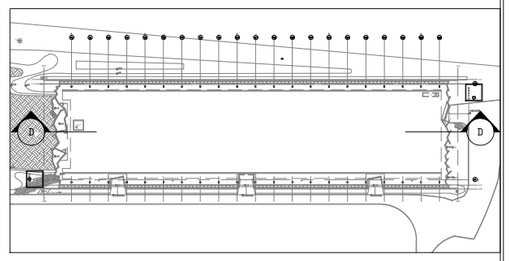
圖檔	10212-1
比例	A1:1/100 A3:1/200
日期	
修正	

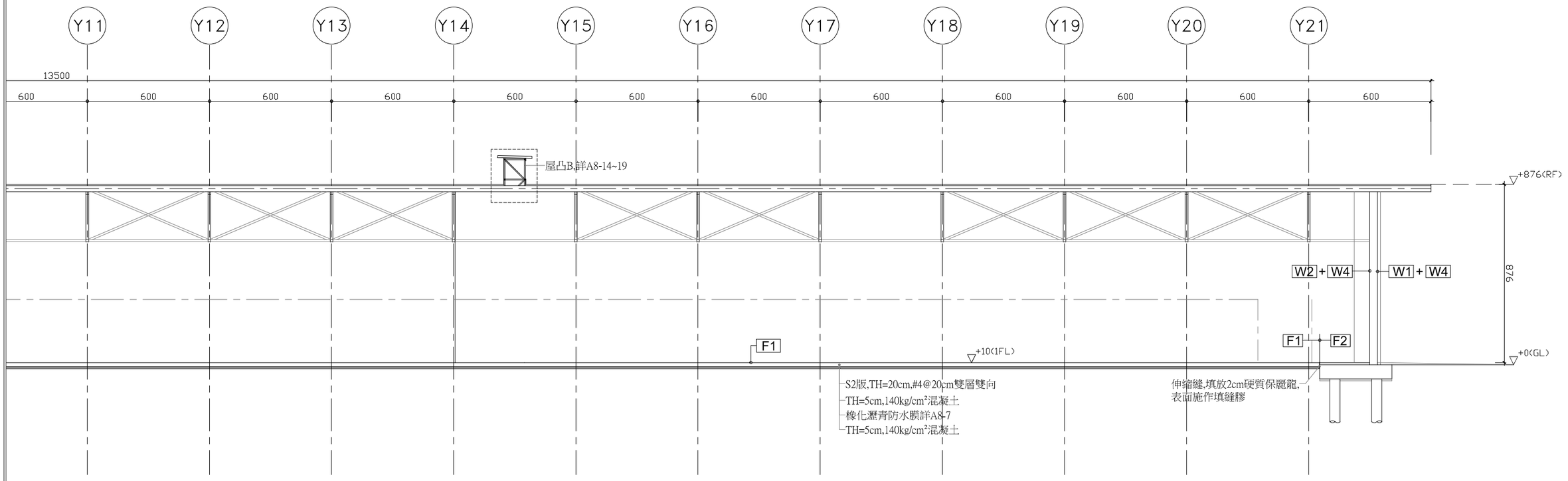
宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

D-D'剖面圖(一)

圖號 A4-4

張號 AX





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圖檔	10212-1
比例	A1:1/100 A3:1/200
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

D-D'剖面圖(二)

圖號 A4-5

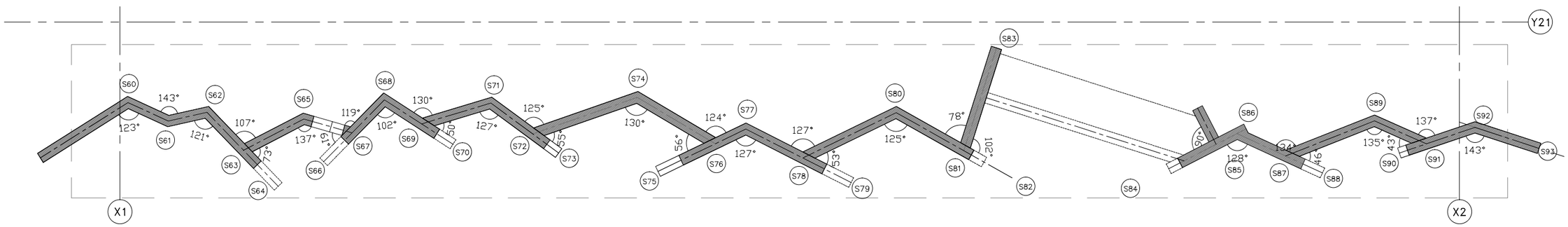
張號 AX

X1－Y1	(0,0,10)		
	+10	+330	最頂部
S01	(－414,－170,10)	－	(－414,－170,10)
S02	(－368,69,10)	(－368,69,330)	(－368,69,469.4)
S03	(－442,70,10)	(－442,70,330)	(－442,70,470)
S04	(－426,123,10)	(－426,123,330)	(－426,123,513.2)
S05	(－398,223,10)	(－398,223,330)	(－398,223,603.4)
S06	(－585,206,10)	(－585,206,330)	(－585,206,591)
S07	(－498,375,10)	(－498,375,330)	(－498,375,694)
S08	(－517,443,10)	(－518,443,330)	(－518,443,727.3)
S09	(－418,527,10)	(－418,527,330)	(－418,527,753.5)
S10	(－461,634,10)	(－461,634,330)	(－461,634,781.2)
S11	(－348,799,10)	(－348,799,330)	(－348,799,801.7)
S12	(－182,970,10)	－	(－182,970,295)
S13	(－218,986,10)	－	(－218,986,295)
S14	(－319,1031,10)	(－320,1031,330)	(－320,1031,830.5)
S15	(－541,526,10)	(－541,526,330)	(－549,552,755.7)
S16	(－633,709,10)	(－636,688,330)	(－638,668,779.5)
S17	(－930,607,10)	(－930,607,330)	(－930,607,818.9)
S18	(－639,1040,10)	(－640,1040,330)	(－640,1040,831)
S19	(－665,1127,10)	(－657,1088,330)	(－646,1063,827.3)
S20	(－559,1138,10)	(－567,1128,330)	(－567,1128,836.9)
S21	(－414,1313,10)	(－414,1313,330)	(－414,1313,848.6)
S22	(－611,1523,10)	(－588,1536,330)	(－574,1557,849.9)
S23	(－528,1602,10)	(－527,1602,330)	(－527,1602,855)
S24	(－461,1665,10)	(－461,1665,330)	(－461,1665,854.4)
S25	(－452,1674,10)	－	(－452,1674,295)
S26	(－355,1692,10)	－	(－350,1692,295)

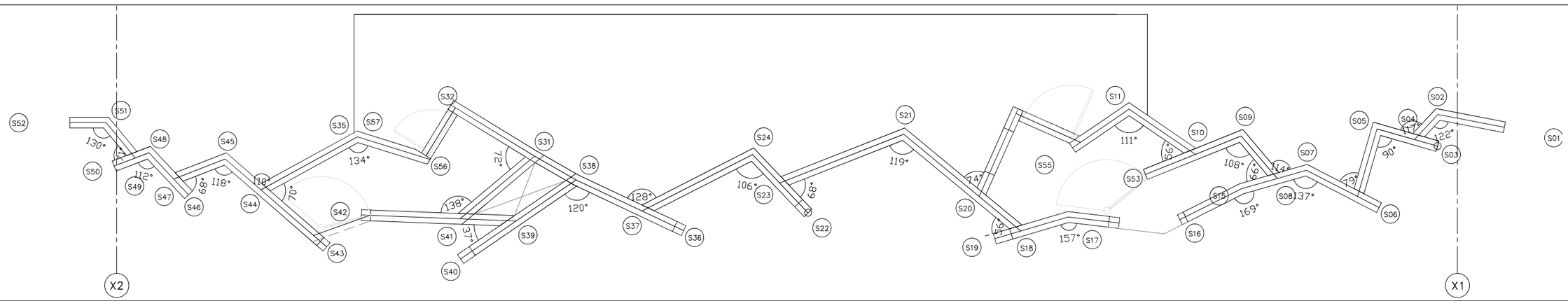
	+10	+330	最頂部
S27	(－153,1716,10)	－	(－153,1716,295)
S28	(－224,2099,10)	－	(－224,2099,295)
S29	(－159,2208,10)	－	(－159,2208,295)
S30	(－219,2409,10)	－	(－219,2409,295)
S31	(－465,2173,10)	(－465,2173,330)	(－465,2173,821)
S32	(－351,2359,10)	(－351,2359,330)	(－351,2359,800)
S33	(－295,2479,10)	－	(－294,2481,295)
S34	(－381,2547,10)	－	(－378,2552,295)
S35	(－414,2574,10)	(－420,2585,330)	(－414,2574,764)
S36	(－622,1861,10)	(－630,1843,330)	(－639,1825,845.2)
S37	(－593,1922,10)	(－593,1922,330)	(－593,1922,841)
S38	(－521,2076,10)	(－521,2076,330)	(－521,2076,830)
S39	(－616,2216,10)	(－616,2216,330)	(－616,2216,817)
S40	(－673,2299,10)	(－673,2299,330)	(－704,2346,801.6)
S41	(－611,2346,10)	(－611,2346,330)	(－611,2346,801.5)
S42	(－603,2557,10)	(－603,2557,330)	(－602,2596,761.7)
S43	(－650,2688,10)	(－650,2688,330)	(－677,2658,743.7)
S44	(－543,2810,10)	(－544,2810,330)	(－544,2810,681.4)
S45	(－472,2893,10)	(－472,2893,330)	(－472,2893,634.8)
S46	(－555,2979,10)	(－555,2979,330)	(－555,2979,574.5)
S47	(－518,3013,10)	(－519,3013,330)	(－519,3013,547)
S48	(－457,3071,10)	(－457,3071,330)	(－457,3071,494.1)
S49	(－469,3103,10)	(－469,3103,330)	(－469,3103,461.7)
S50	(－488,3152,10)	(－488,3152,330)	(－488,3152,405.2)
S51	(－387,3171,10)	(－387,3171,330)	(－387,3171,373.3)
S52	(－387,3340,10)	－	(－387,3340,10)
S53	－	(－507,750,330)	(－507,750,791.7)
S55	－	(－471,958,330)	(－471,958,817.2)
S56	－	(－470,2425,330)	(－470,2425,791)
S57	－	(－409,2579,330)	(－409,2579,765.8)

	+10	+330	最頂部
S59	(1467,－85,10)	－	(1521,－170,67)
S60	(362,43,10)	(362,43,330)	(362,43,426)
S61	(1430,137,10)	(1430,137,330)	(1430,137,519)
S62	(1410,227,10)	(1410,227,330)	(1410,227,588)
S63	(1498,312,10)	(1498,312,330)	(1498,312,644)
S64	(1532,344,10)	(1555,344,330)	(1581,393,687)
S65	(1425,453,10)	(1425,453,330)	(1425,453,713)
S66	(1425,548,10)	(1496,526,330)	(1524,526,730)
S67	(1457,566,10)	(1457,566,330)	(1457,566,749)
S68	(1381,641,10)	(1381,641,330)	(1381,641,765)
S69	(1437,727,10)	(1437,727,330)	(1437,727,778)
S70	(1460,763,10)	(1496,778,330)	(1460,763,789)
S71	(1388,888,10)	(1388,888,330)	(1388,888,799)
S72	(1460,986,10)	(1460,986,330)	(1460,986,810)
S73	(1495,1047,10)	(1496,1036,330)	(1495,1047,813)
S74	(1375,1230,10)	(1375,1230,330)	(1375,1230,829)
S75	(1547,1278,10)	(1537,1299,330)	(1547,1278,835)
S76	(1483,1412,10)	(1483,1412,330)	(1483,1412,838)
S77	(1449,1483,10)	(1449,1483,330)	(1449,1483,839)
S78	(1516,1616,10)	(1516,1616,330)	(1516,1616,840)
S79	(1542,1666,10)	(1553,1690,330)	(1542,1666,838)
S80	(1410,1834,10)	(1410,1834,330)	(1410,1834,835)
S81	(1499,1999,10)	(1499,1999,330)	(1499,1999,826)
S82	(1562,2103,10)	(1555,2092,330)	(1562,2103,820)
S83	(1260,2067,10)	(1260,2067,330)	(1260,2067,821)
S84	(1561,2430,10)	(1566,2420,330)	(1561,2430,784)
S85	(1459,2628,10)	(1459,2628,330)	(1459,2628,743)
S86	(1448,2650,10)	(1448,2650,330)	(1448,2650,737)
S87	(1511,2741,10)	(1511,2741,330)	(1511,2741,703)
S88	(1551,2827,10)	(1540,2806,330)	(1551,2827,685)
S89	(1430,2949,10)	(1430,2949,330)	(1430,2949,588)
S90	(1505,5005,10)	(1493,3332,330)	(1505,5005,527)
S91	(1483,3069,10)	(1483,3069,330)	(1483,3069,486)
S92	(1445,3183,10)	(1445,3183,330)	(1445,3183,356)
S93	(1468,3255,10)	－	(1501,3355,67)

牆面座標圖



南側牆平面圖



北側牆平面圖

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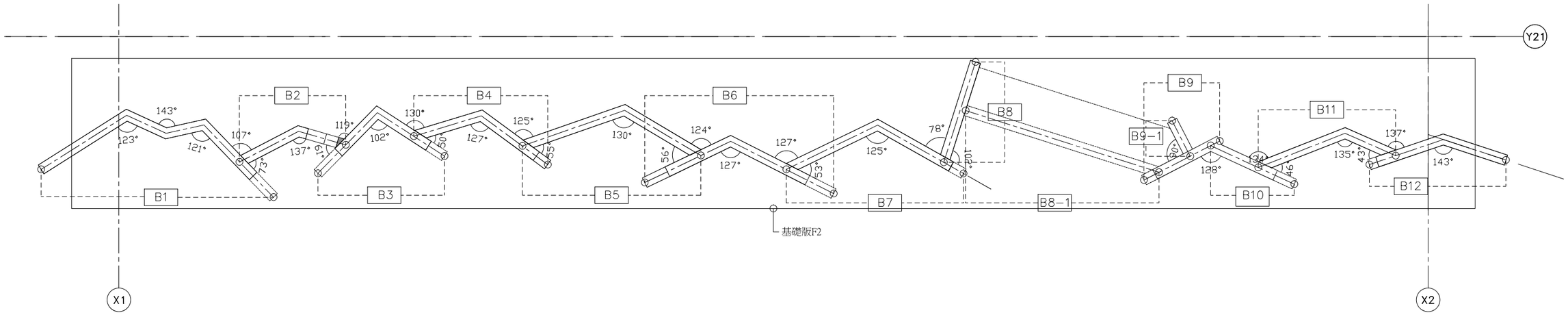
第一次變更設計

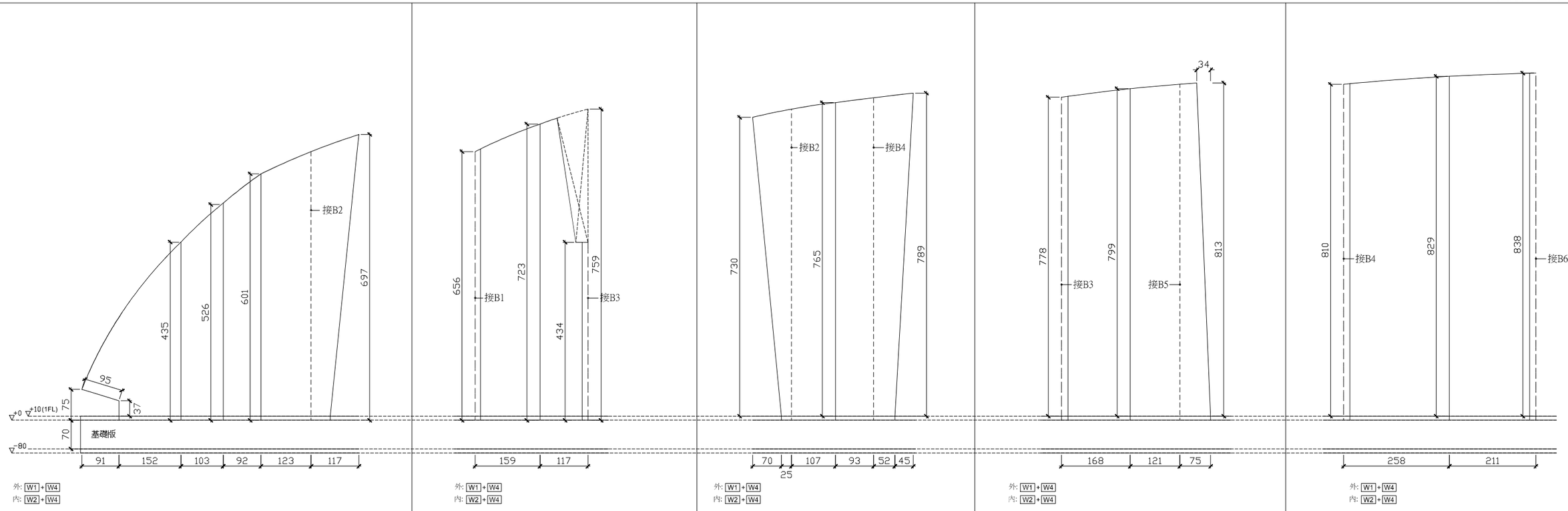
牆面座標圖

圖號 A7-1

張號



南面牆平面圖 1/100



B1	面積:29.6m2	B2	面積:17.9m2	B3	面積:25.8m2	B4	面積:28.1m2	B5	面積:39.3m2

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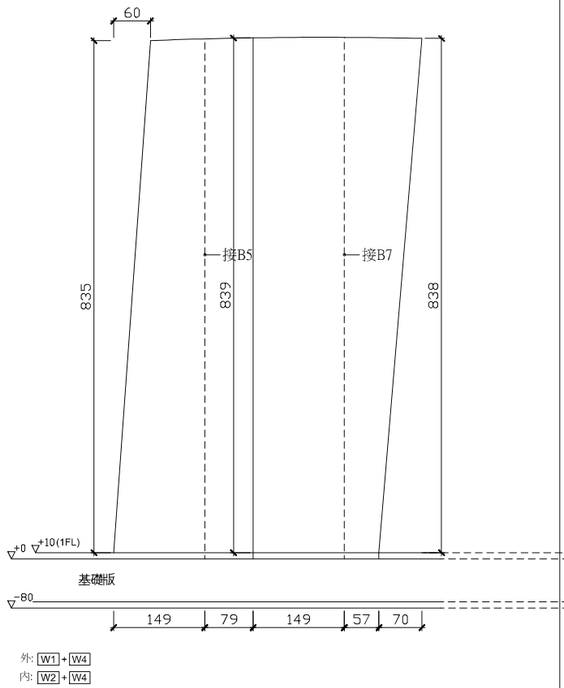
第一次變更設計

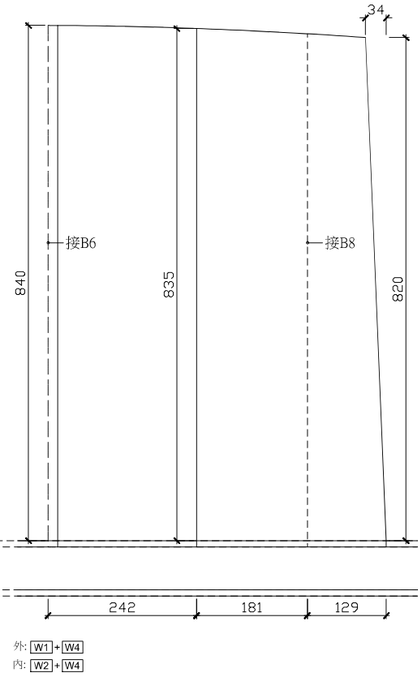
南側外牆展開圖(一)

圖號 A7-2

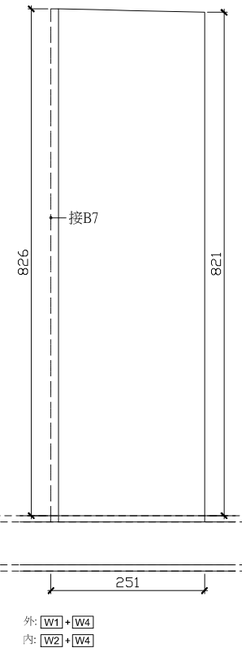
裝號



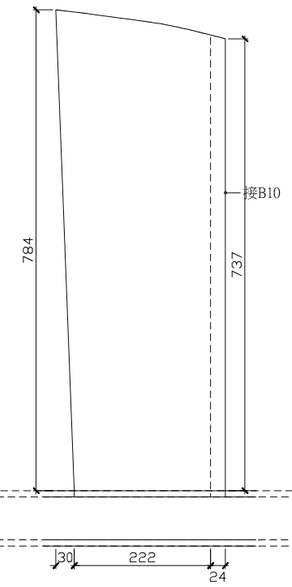
B6 面積:37.1m2



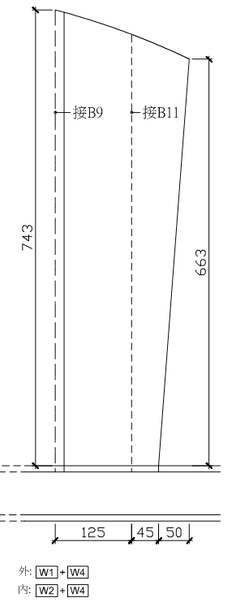
B7 面積:45m2



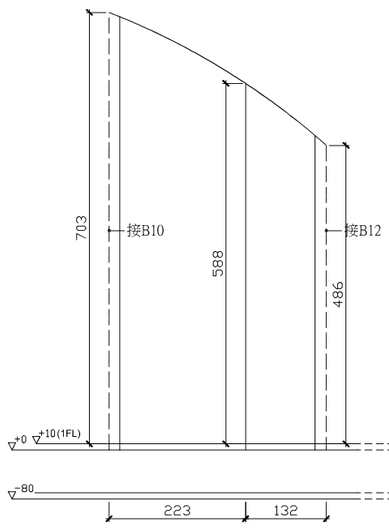
B8 面積:20.9m2



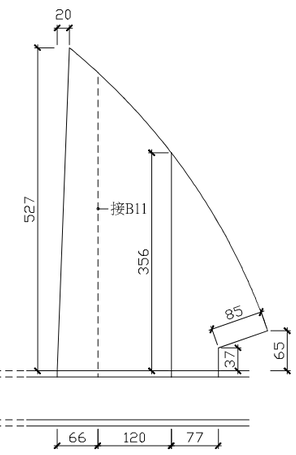
B9 面積:20.3m2



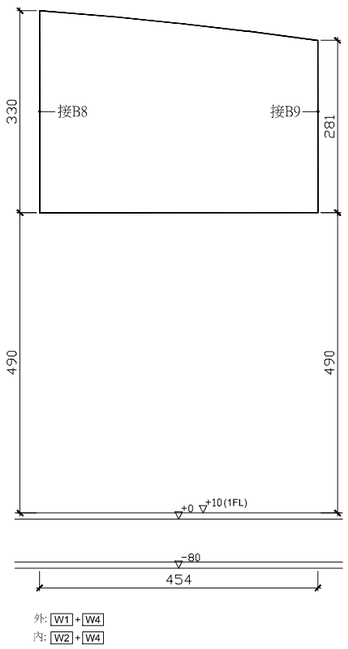
B10 面積:14.2m2



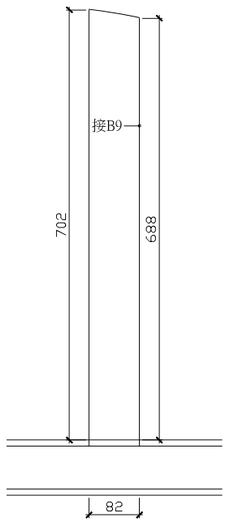
B11 面積:21.8m2



B12 面積:11.3m2



B8-1 面積:14m2



B9-1 面積:5.8m2

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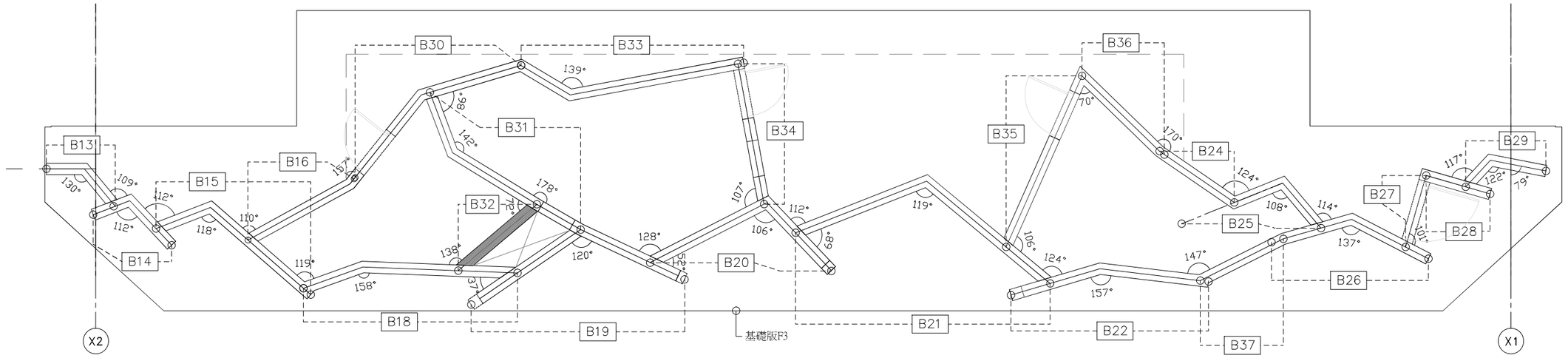
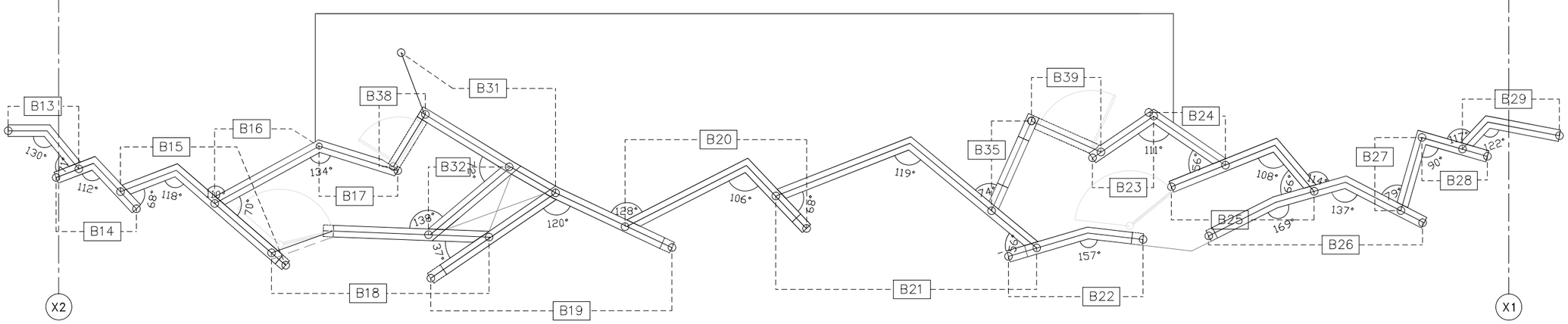
南側外牆展開圖(二)

圖號 A7-3

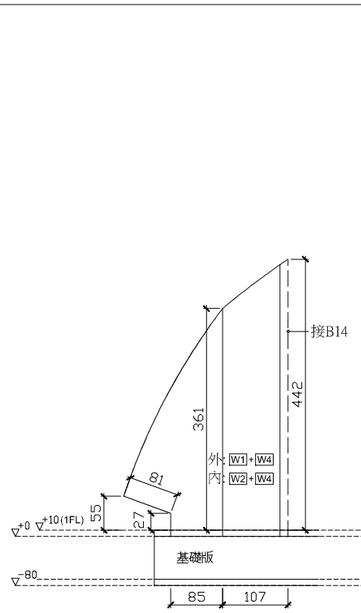
張號



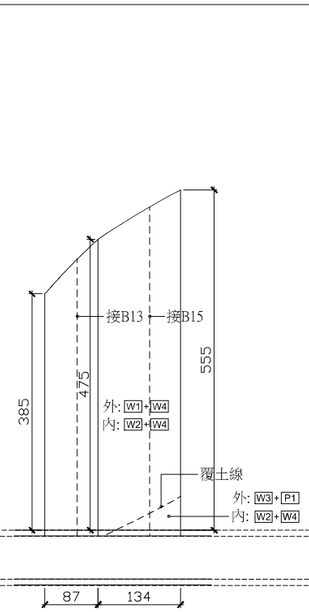
北側牆一層平面圖 1/100



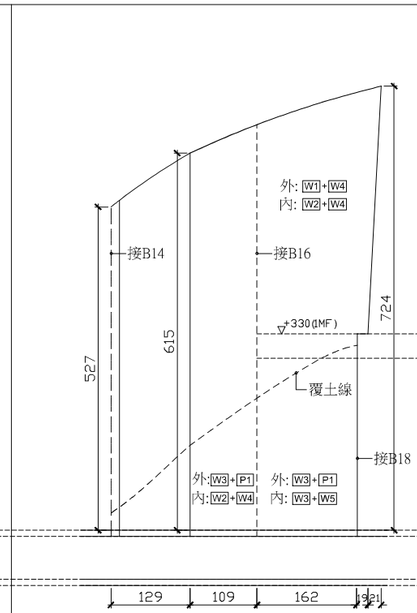
北面牆夾層平面圖 1/100



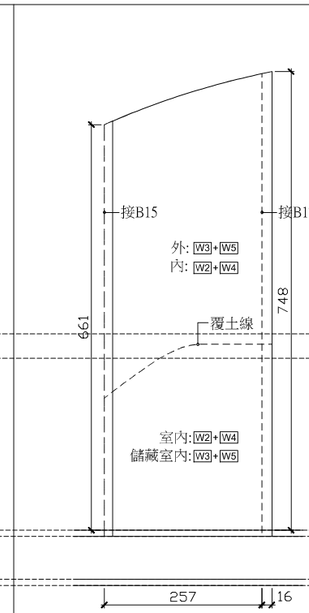
B13 面積:7.8m2



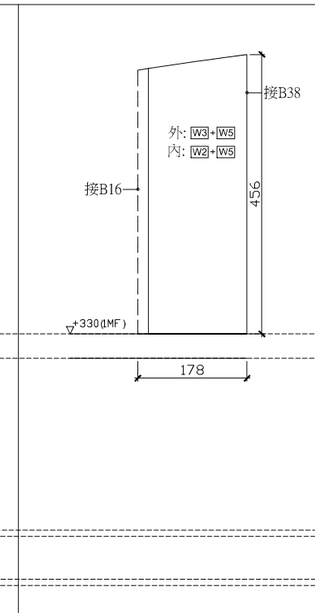
B14 面積:11m2



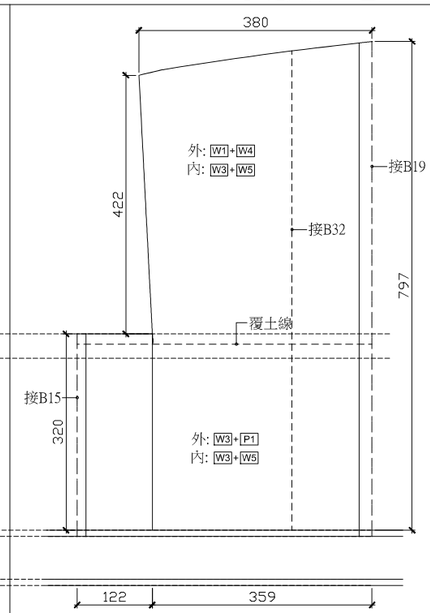
B15 面積:27.1m2



B16 面積:19.9m2



B17 面積:7.9m2



B18 面積:32.5m2

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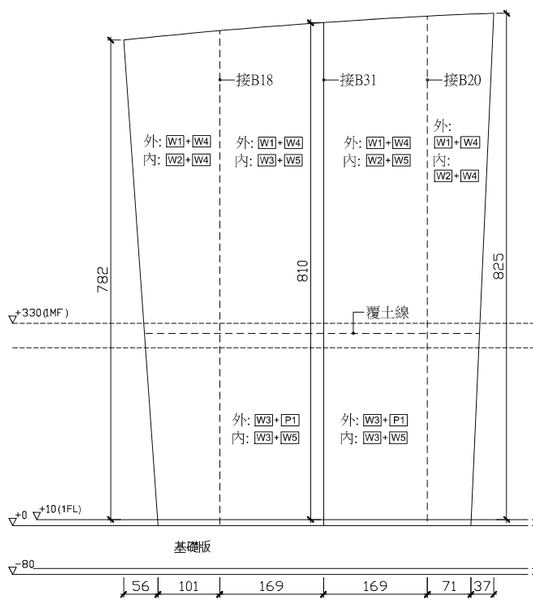
圖檔	10212-1
比例	A1:1/50 A3:1/100
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程第一次變更設計

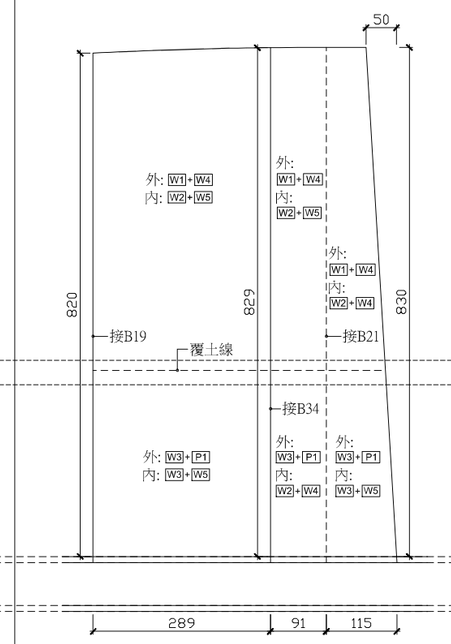
北側外牆展開圖(一)

圖號 A7-4

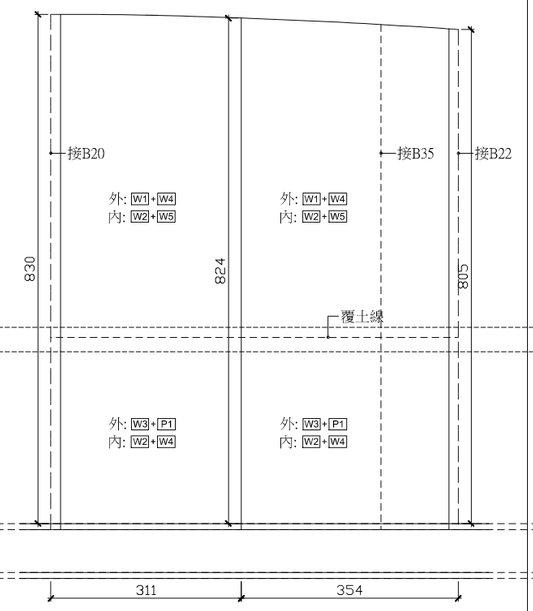
張號



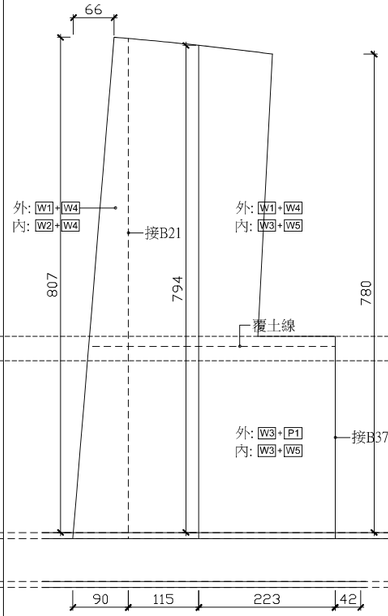
B19 面積:45.5m2



B20 面積:39.3m2

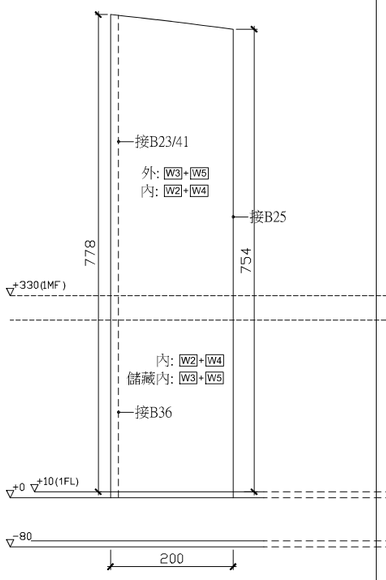


B21 面積:55.2m2

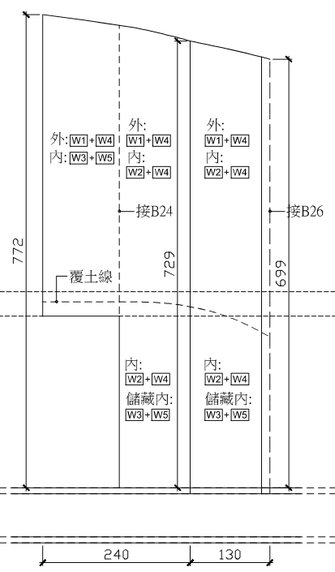


※B22 面積:26.35m2

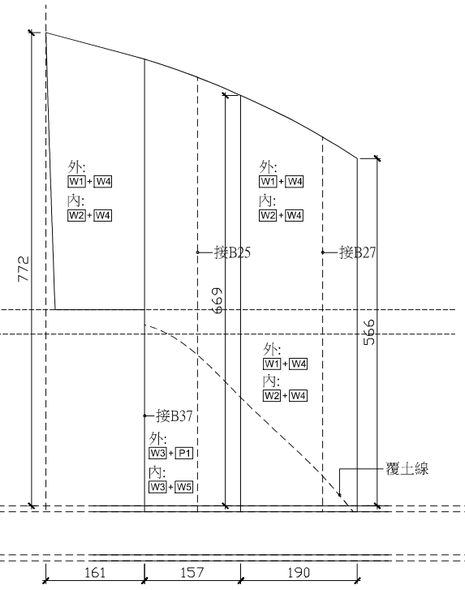
B23 面積:16.4m2



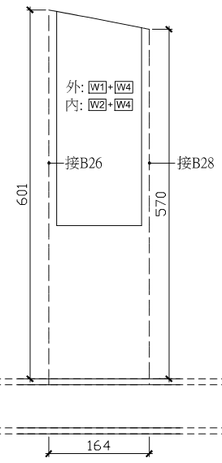
B24 面積:15.5m2



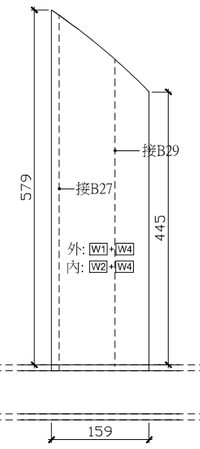
B25 面積:27.8m2



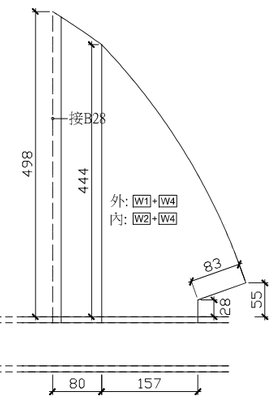
※B26 面積:29.8m2



B27 面積:9.8m2



B28 面積:8.4m2



B29 面積:10.2m2

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圖檔	10212-1
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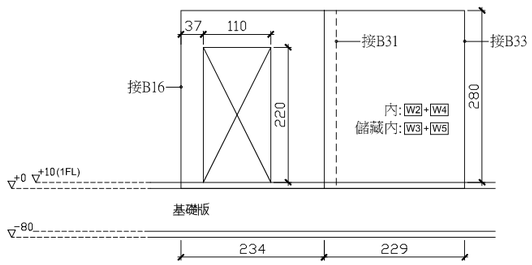
宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

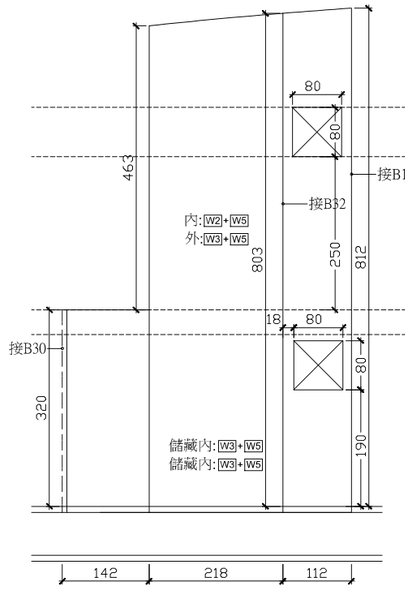
北側外牆展開圖(二)

圖號 A7-5

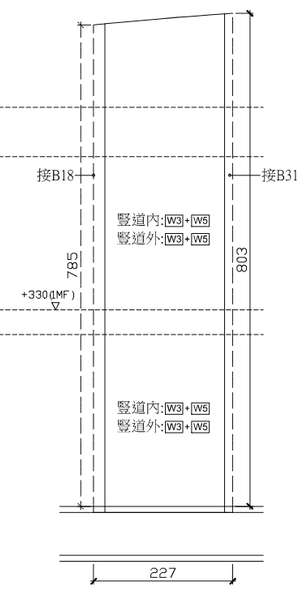
張號



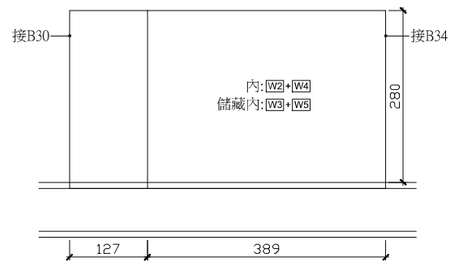
B30 面積:10.9m2



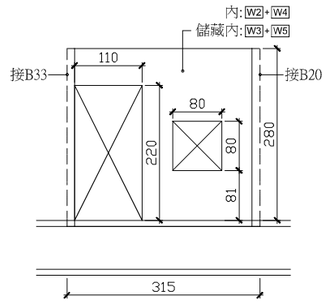
※B31 面積:31.3m2



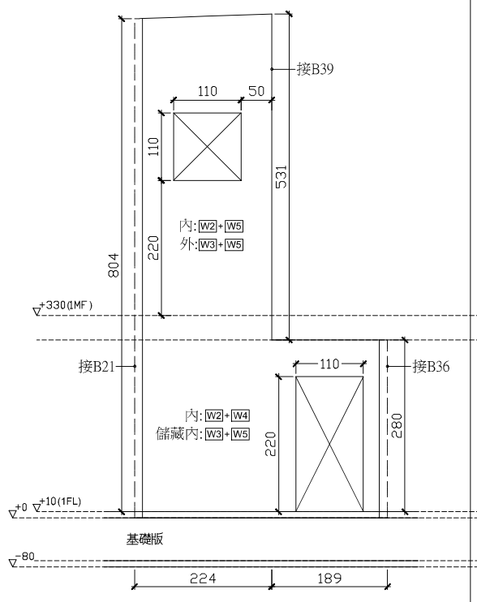
B32 面積:18.2m2



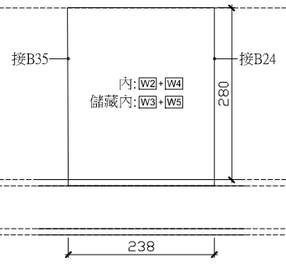
B33 面積:15m2



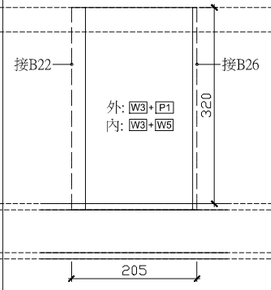
B34 面積:6.6m2



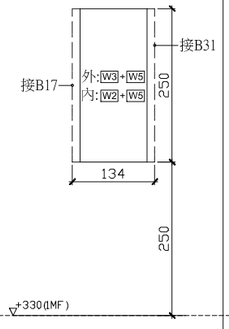
※B35 面積:21.2m2



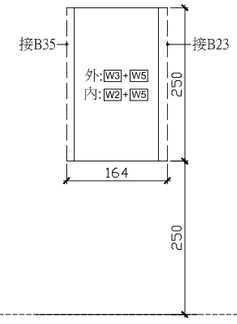
B36 面積:6.9m2



B37 面積:6.8m2



B38 面積:3.4m2



B39 面積:4.1m2

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圖檔	10212-1
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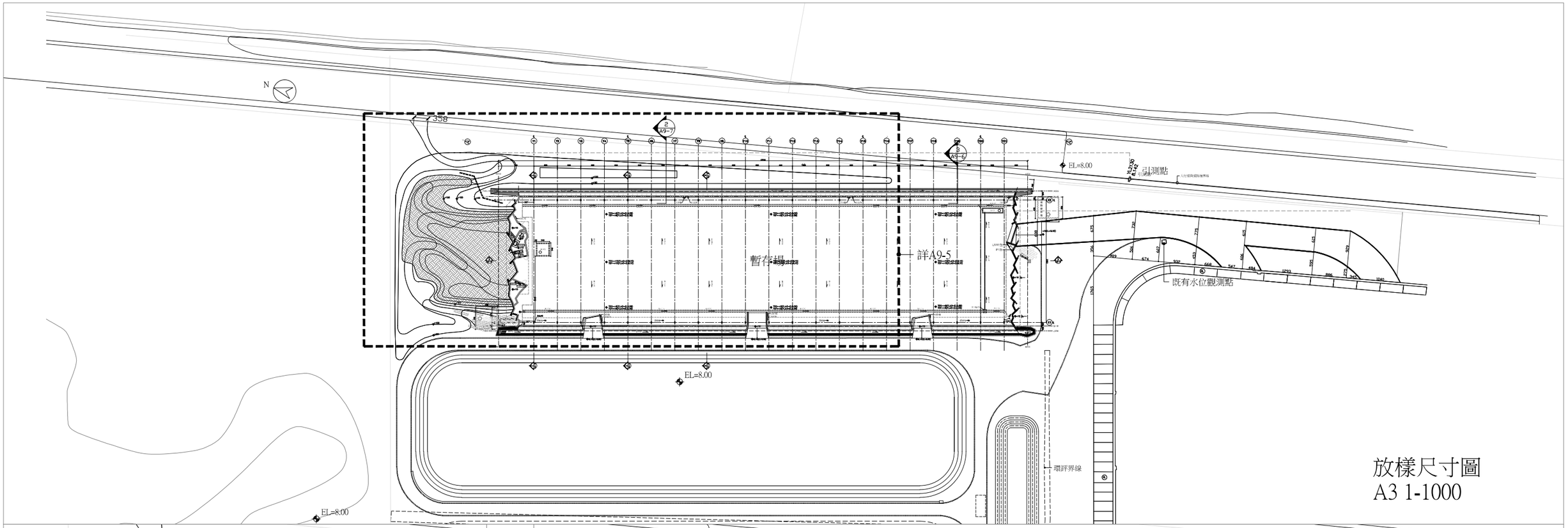
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

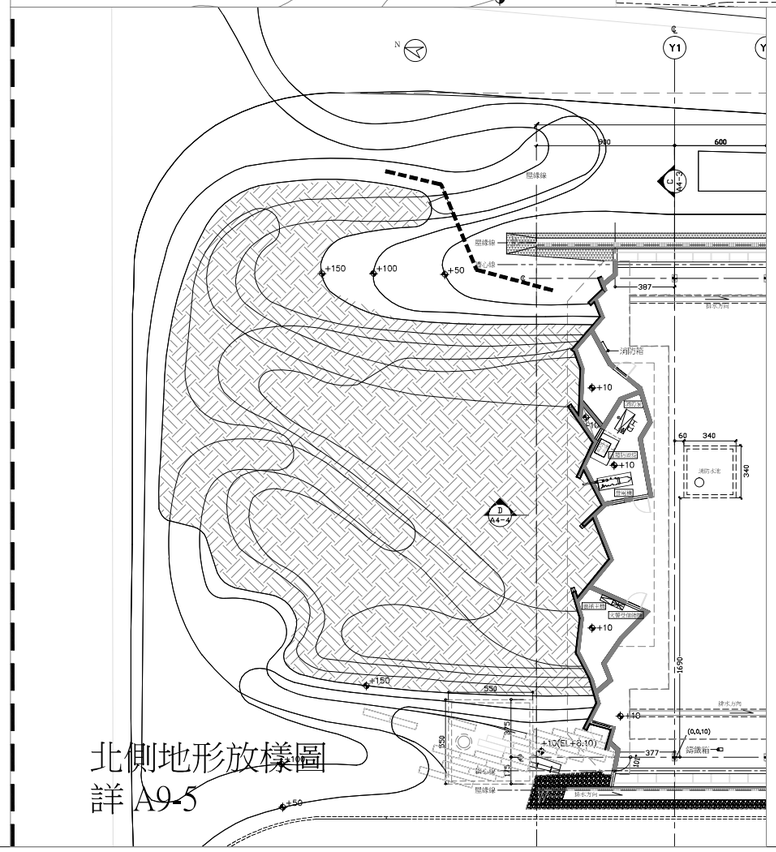
北側外牆展開圖(三)

圖號 A7-6

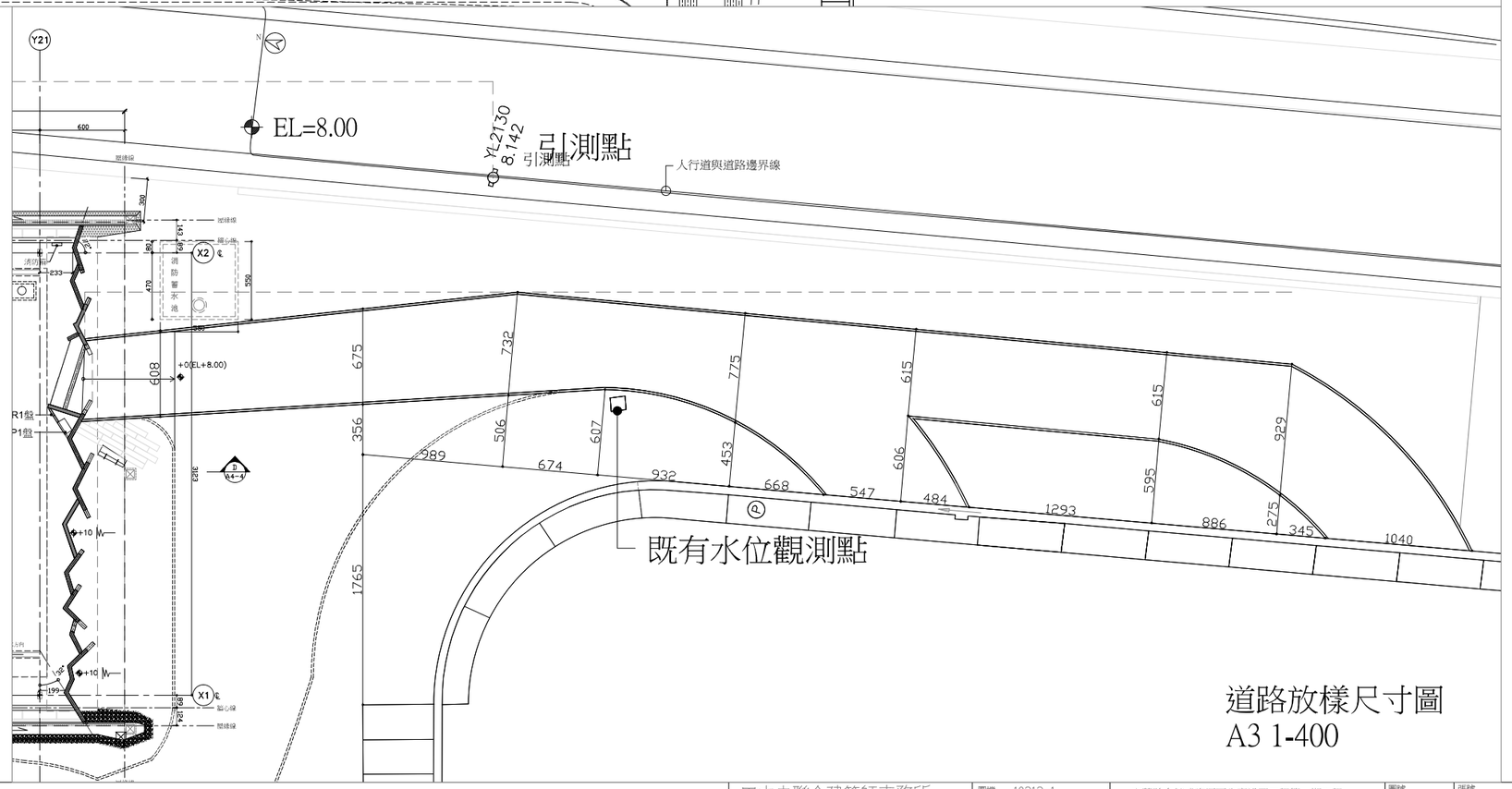
張號



放樣尺寸圖
A3 1-1000



北側地形放樣圖
詳 A9-5



道路放樣尺寸圖
A3 1-400

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圖檔	10212-1
比例	A1: A3:
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

放樣及尺寸平面圖

圖號 A9-1

張號 AX

N

2
A9-7

B
A9-6

EL=8.00

12250
Φ12

引道點

人行道與引道連接處

詳木圍籬,詳A9-8

暫存場

既有水位觀測點

焚化廠道路

第一期工程範圍

EL=8.00

環評界線

EL=8.00

EL=9.00

EL=10.00

圖例	名稱
	戶外地坪鋪設熱拌瀝青混凝土 TH:10cm
	砂壤土TH:30cm (喬木植栽穴 TH:80cm)
	砂壤土TH=20cm (喬木植栽穴 TH:80cm)

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圖檔	10212-1
比例	A1:1/500 A3:1/1000
日期	
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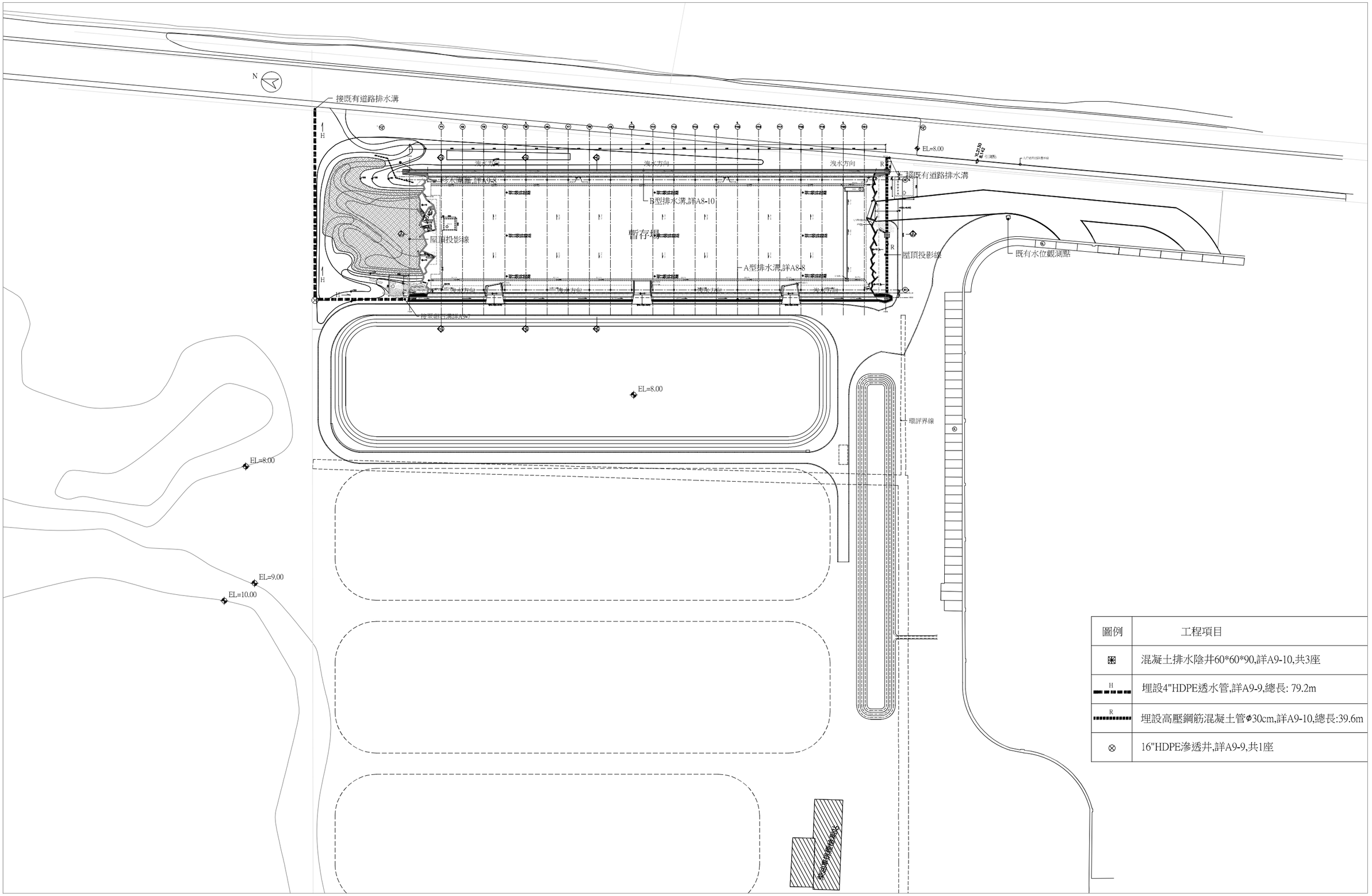
宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

撲面平面圖

圖號 A9-2

張號 AX



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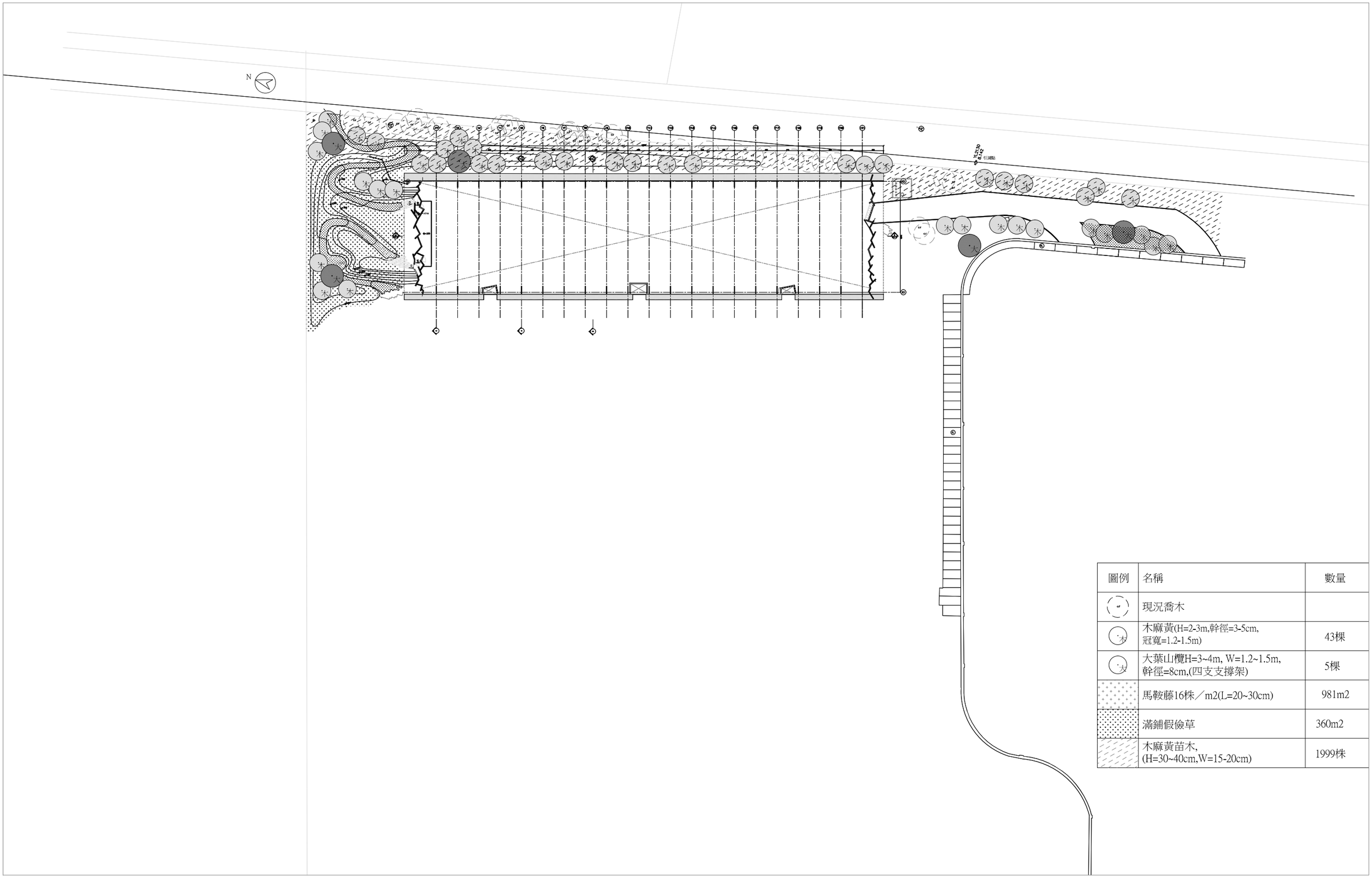
日期	
修正	

宜蘭縣合儲式資源再生廠設置工程第一期工程
第一次變更設計

排水平面圖

圖號 A9-3

張號 AX



圖例	名稱	數量
	現況喬木	
	木麻黃(H=2-3m,幹徑=3-5cm, 冠寬=1.2-1.5m)	43棵
	大葉山欖H=3~4m, W=1.2~1.5m, 幹徑=8cm,(四支支撐架)	5棵
	馬鞍藤16株／m2(L=20~30cm)	981m2
	滿鋪假儉草	360m2
	木麻黃苗木, (H=30~40cm,W=15-20cm)	1999株

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日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

植栽平面圖

圖號 A9-4

張號 AX

基地線

N

Y1 Y2 Y3 Y4 Y5

EL=8.00 EL=8.50 EL=9.00 EL=8.00

900 600 600 600 600 600

EL=9.00

C A4-3

A A4-3

+100 +50

洩水方向

建築屋頂投影線

EL=9.50 EL=10.00

+200 +150 +100 +50

C1

杉木圍籬,詳A9-8

EL=10.50 EL=11.00

+250 +300

+325 +330

消防箱

建築外牆

EL=10.00

D A4-4

+330

EL=9.50 EL=10.50 EL=11.00

+330

+325

+250 +200 +150

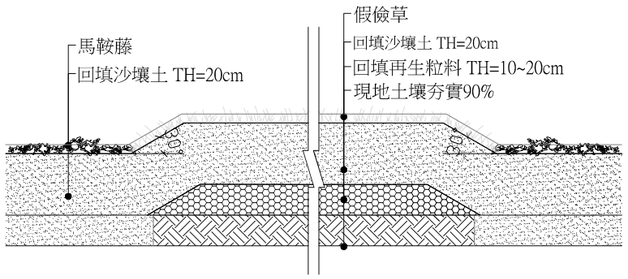
EL=9.00

EL=8.50

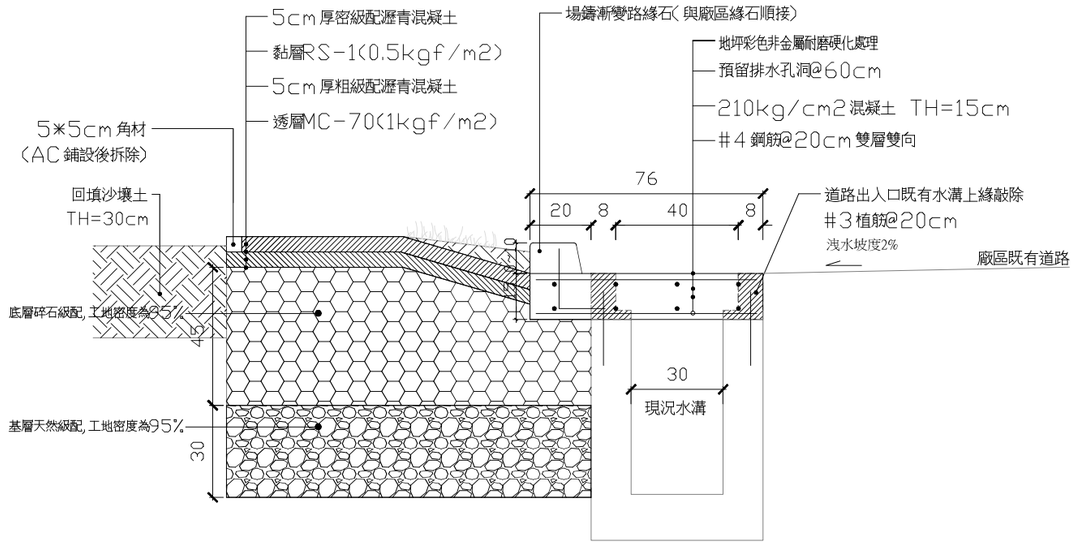
EL=8.00

+100

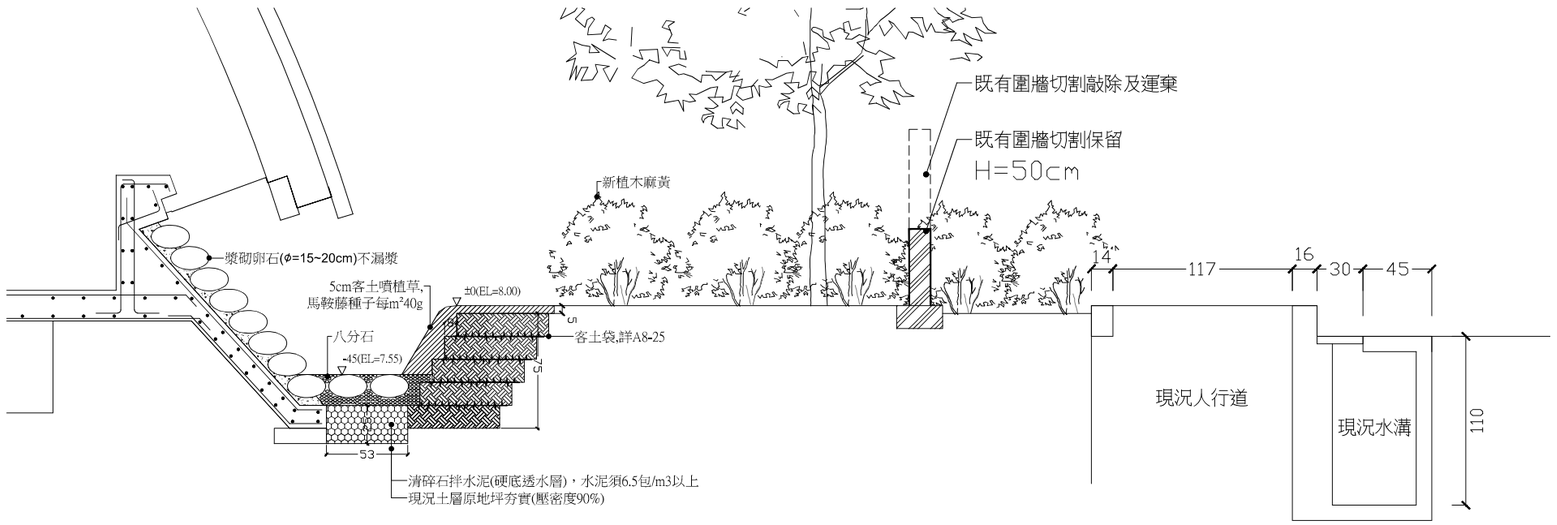
田中央聯合建築師事務所 宜蘭市建業路428號 TEL 03-9253725 FAX 03-9253980 E-mail:fieldoffice@fieldoffice.com.tw	圖檔 10212-1 比例 A1:1/100 A3:1/200 日期 修正	宜蘭縣含儲式資源再生廠設置工程第一期工程 第一次變更設計 北側地形平面圖	圖號 A9-5 張號 AX



① 馬鞍藤及假儉草銜接剖面圖,比例尺:1/20



② 瀝青混凝土、現況草地及路緣收邊剖面 scale:1/20



③東側水溝、新種植栽及現況人行道剖面,比例尺:1/40

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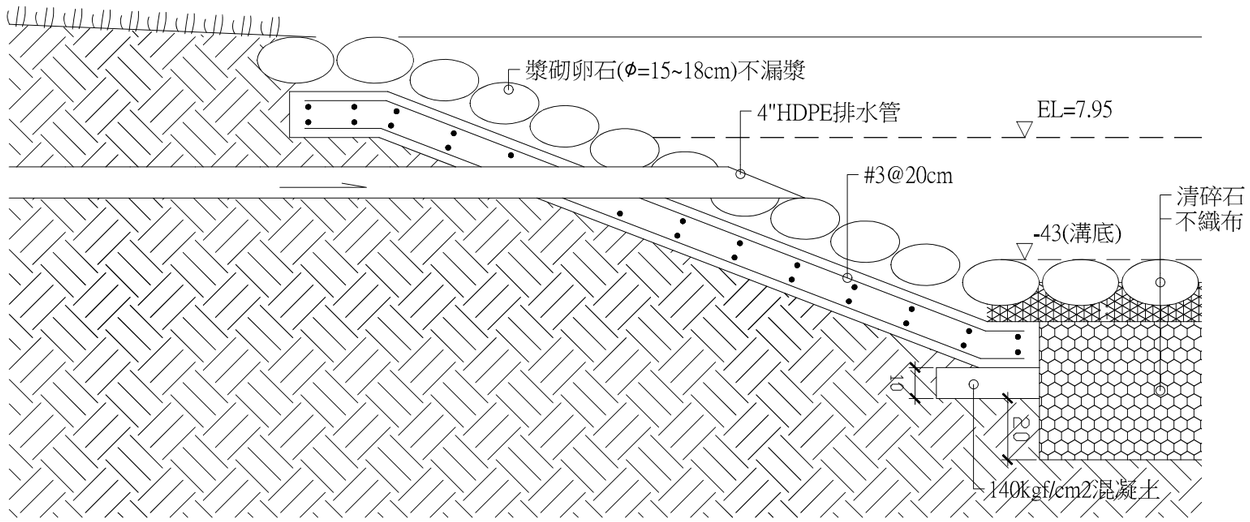
比例	
日期	
修正	

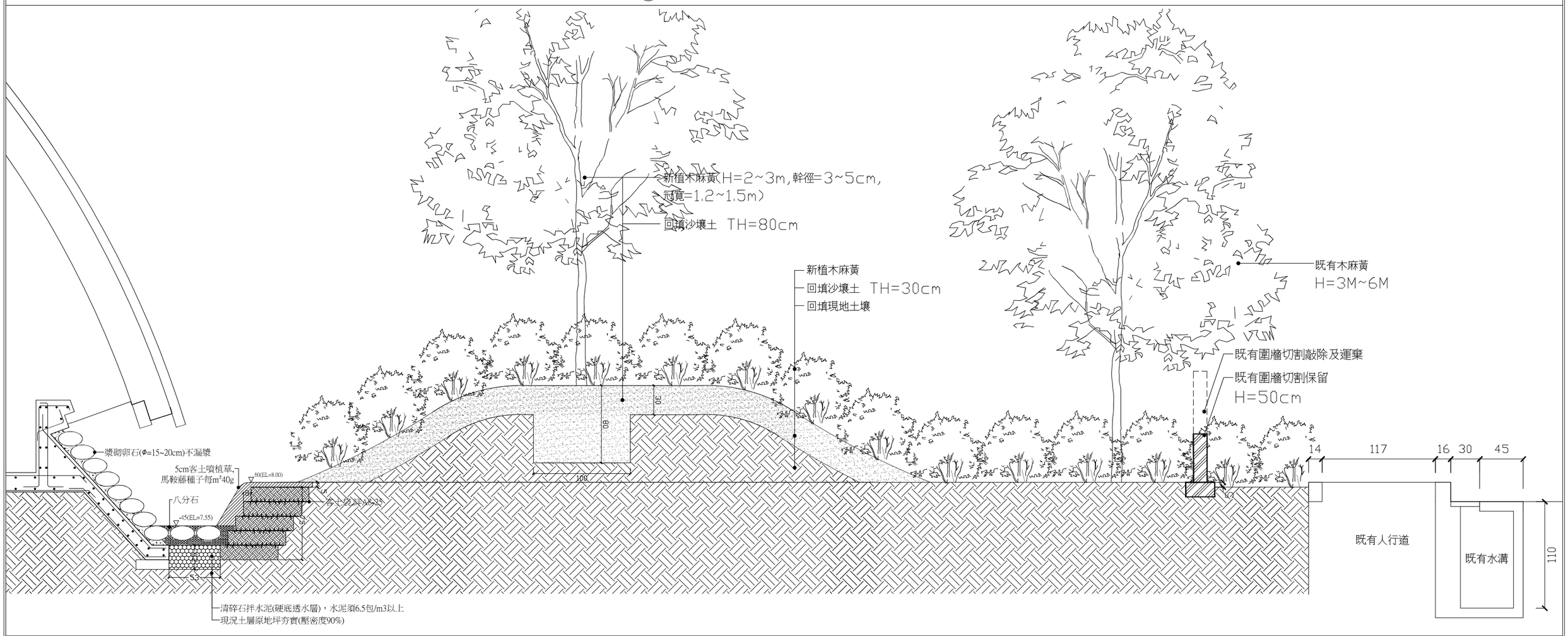
宜蘭縣倉儲式資源再生廠設置工程第一期工程

景觀剖面圖(一)

圖號	張號
A9-6	



① 卵石排水溝南北向剖面圖



② 東側水溝、新種植栽及現況人行道剖面

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日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程

景觀剖面圖(二)

圖號	頁號
A9-7	

宜蘭縣倉儲式資源再生廠設置工程

	DRAWING No	DRAWING TITLE		DRAWING No	DRAWING TITLE		DRAWING No	DRAWING TITLE		DRAWING No	DRAWING TITLE
	圖 號	圖 名		圖 號	圖 名		圖 號	圖 名		圖 號	圖 名
●	S0.00	結構圖說索引表									
●	S0.01	結構設計一般說明									
●	S1.01	錨錠與標準彎鉤詳圖									
●	S1.02	梁箍筋與穿孔補強詳圖									
●	S1.03	版與牆配筋詳圖(一)									
●	S1.04	版與牆配筋詳圖(二)									
●	S1.05	銲接標準圖									
●	S2.01	一層結構平面圖									
●	S2.02	一層夾層及屋頂層結構平面圖									
●	S3.01	構架剖面詳圖(一)									
●	S3.02	構架剖面詳圖(二)									
●	S4.01	RC配筋剖面詳圖									
●	S5.01	預力混凝土樁詳圖									
●	S6.01	鋼構接合詳圖(一)									
●	S6.02	鋼構接合詳圖(二)									

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圖檔 10212-1
比例
日期
修正

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

結構圖說索引表

圖號 S0-0

張號

宜蘭縣倉儲式資源再生廠設置工程
結構設計一般說明

一.一般說明

1.查閱本圖時應參閱各有關規範及其附件.

2.本圖所有標註尺寸之單位,除另有註明外,均為公厘(mm).

3.除結構尺寸外,各尺寸應以建築圖為準,遇有疑義應由建築師解釋.

4.承包商應於施工前核對各種尺寸,確定各管道,套管,錨固螺栓及各項預埋設施之零件及各機電設備安裝用之開口.

5.承包商施工時應參照建築圖,景觀設計圖,機電設計圖,所示之樓面高差,填坂,綠飾,景觀牆溝道等施工.

6.若有未表示之詳圖,應按類似之詳圖,經由建築師同意後施工.

7.承包商在施工過程中應提供足夠的支撐,以抵抗風力,地震力,及施工中產生之不平衡力,以確保施工安全.

8.本工程結構體樑柱之偏向均需與建築圖核對,不符之處,需經工地工程師複核,依複核後之尺寸施工.

9.結構體樑鋼筋無法直通時,均需以充分之埋設長度彎入柱或樑之他側內.

10.本工程應以政府機關審核通過之設計圖為施工之依據,施工期間為配合其它工程所做之修正或變更設計,應以修正後之設計圖為準.

11.除開挖支撐另有相關之附註說明外,本說明適用於一般規定.

12.承商於基礎開挖前,須視現地之地質狀況及自身之施工條件研擬完善且安全可行之施工計劃;相關施工計劃須經承商聘請之主任技師完成簽證後始可報送建築師審核,俟建築師審查核准備查後,承商方可依據施工計劃施作.惟本工程開挖及基礎施工期間,相關施工安全仍應由承商負完全責任,任何因開挖及基礎施工作業所導致本工程災損或其他損鄰事件,承包商須負全責修復妥當,並不得向業主求償.

13.施工期間作用在結構體之施工荷重,應由承包商自行檢核是否超過設計之荷重,若施工荷重大於原結構之設計荷重,承包商應檢送結構計算書及必要之補強設計送請建築師核可後方可據以施工.

14.承商於施工前,須完成模板(或鋼承板)及支撐應力計算,並依計算結果研擬施工計劃並繪製相關施工詳圖,相關結構計算書及施工計劃,圖說須經承商聘請之主任技師完成簽證後始可報送建築師審核,俟建築師審查核准備查後,承商方可依據施工計劃施作.

二.設計標準

本案設計依據:

1.內政部最新頒佈之建築技術規則.

2.內政部營建署"建築物耐震設計規範及解說",民國100年7月1日起實施.(本工程採用耐震韌性設計)

3.內政部營建署"混凝土結構設計規範",民國100年7月1日起實施.

4.Building Code Requirements for Reinforced Concrete (ACI 318-05).

5.內政部營建署頒布之"鋼構造建築物鋼結構設計技術規範"(鋼結構極限設計法規範及解說),民國99年10月1日起實施.

三.材料強度與規格說明

1.混凝土

(1)水泥除特別註明外,其成分及品質應符合CNS 61 卜特蘭II型水泥之規定.

(2)混凝土所使用之砂須符合CNS 3090 之規定,不得使用海砂.

(3)混凝土氯離子含量須符合CNS 3090之規定,每立方公尺混凝土氯離子含量不得超過0.15公斤.

(4)除特別註明外,所有混凝土結構均為鋼筋混凝土結構,各強度均以28天齡期抗壓強度計算.

(5)混凝土粗骨材之最大粒徑不得大於1.9cm.

(6)當混凝土平面澆置尺度超過六十公尺,施工單位應擬定分區澆置計畫,以降低發生乾縮裂縫之可能,施工計畫應經監造單位核可後方可施作.

(7)本案混凝土強度與應用場合分述如下表所示:

應用場合	混凝土強度 (fc')	備 註
結構體	210 kgf/cm² (3000 psi)	常重混凝土
打底用混凝土	140 kgf/cm² (2000 psi)	常重混凝土

2.鋼筋

鋼筋為竹節鋼筋,鋼材品質須符合CNS 560材料規範之規定,各種鋼材之規定如下:

(1) D13(#4)及以上用CNS 560 SD420W fy=4200kgf/cm²

亦可採用CNS 560 SD420,惟應符合下列規定:

(a) 實測降伏強度不得超過規定降伏強度1200kgf/cm² 以上.

(b) 實測極限抗拉強度與實測降伏強度之比值不得小於1.25.

D10(#3)及以下用CNS 560 SD280 fy=2800kgf/cm²

(2) 鋼筋搭接與續接

(a) 原則上,地面層以上之柱主筋續接,應以搭接工法施工,鋼筋搭接長度及位置應按圖則所示,如未標明,承包商應採用ACI 318C等級進行.

(b) 鋼筋續接器使用須經監造單位同意,並採用SA級之續接器,且不得採用瓦斯壓接.鋼筋續接器相關規定詳S1.08.

(3) 本案禁用水淬鋼筋.

(4) 電焊材料和施工須符合施工說明書及AWS D1.4電焊規範之規定,若需焊接時,承包商應繪製製造及安裝詳圖,經建築師認可後,始可施工.

3.熔接鋼絲網

熔接鋼絲網之規格須符合CNS 6919 G 3132之規定,鋼絲網之材料使用 CNS 6919 G 3132 之規定,鋼絲網之材料使用CNS 1468[低碳鋼線]所規定之普通鋼線,但其機械性能則依下列規定:

(1) 抗拉強度須達55kgf/mm²{539N/mm²}以上.

(2) 降伏強度須達50kgf/mm²{490N/mm²}以上.

4.模板

(1) 承包商於施工前應事先將模板及撐架之詳圖及施工步驟(包含拆模)交由承包商所聘主任技師審查簽署後方可施工,一切因施工安全措施不良所造成之財產,人員損害,概由承包商負責.

(2) 模板必須有足夠的精確性及強度以保持結構體及圖說之尺寸,形狀與位置,且模板的製作須緊密穩妥,不致鬆動,變形或漏漿.

(3) 除特別註明者外,跨度超過6m之樓版及RC梁底模,均須在中央部分預拱隆起.其預拱量除特別註明者外,其他每公尺須有0.5cm之坡度(例如跨度10m梁,中央預拱2.5cm).

(4) 板之支撐須具備足夠之強度,以承受施工載重及其他可能發生之特殊載重,其架設及拆除時間及步驟並應考慮不得對澆鑄中之樓層及已完成澆鑄之樓層造成超載及過量之變形.

(5) 模板拆模時間須依照內政部頒布[結構混凝土施工規範]規定辦理,但不得少於合約規範規定的時間,跨度在12公尺以上之梁底版及懸臂梁,版編號前面有加C者,如CS,CG,或cb其底模拆除須特別注意其強度,變形及安全.懸臂梁版底模須28天方可拆模,若懸臂梁版上方有梁版時,則須待上層樓版混凝土澆置好至少28天,方可拆卸下層懸臂梁版之底模.預力梁須在預力完成後始澆灌上層樓版混凝土,施應力後28天方可拆除梁底版支撐.

(6) 高度大於4m之版梁施工應採用直徑大於2.5吋重型鋼管或型鋼支撐,懸臂梁版上方不可任意堆積重物或作為上層結構物施工之臨時支撐,地面層之堆積覆土,鋼筋置放、重車行走等施工荷重之回撐,應特別考慮.承包商應將施工用架設及支撐詳圖先經其所聘主任技師詳細核算簽署,確認安全無慮後,送監造單位同意始得施工,但監造單位同意並不能減免承包商應負之責任,承包商對本工程模板及支撐架之核算與施工安全應負全責.

5.鋼材

鋼材之施工製造及安裝除依照鋼結構工程施工說明書之規定外並須符合建築技術規則之有關規定.

(1) 大樑位置以樑心對軸線為原則,且必須配合相關建築及結構圖說決定其正確位置.

(2) 小樑之位置未特別註明者均以跨距之兩,參或肆等份均分,與管道,電梯,樓梯,設備或外牆等有關之小樑位置,必須配合相關圖說決定其正確位置.

(3) 四周樓版邊緣正確位置及相關尺寸應詳建築圖.

(4) 固定外部帷幕牆之一次鐵件之做法需由帷幕牆廠商提供正確位置及細部詳圖.

(5) 所有鋼樓梯皆須使用鋅粉底漆.

(6) 所有暴露在戶外的樓梯均需使用符合 ASTM A386 之熱浸鍍鋅.

(7) 除非特別註明,所有桿件皆不須鋅粉底漆及熱浸鍍鋅.

(8) 除非特別註明,跨度超過8M,編號為Sb或Sg之鋼骨小樑中央須按每公尺0.25cm之坡度預拱.

6.基礎螺桿

基礎螺桿使用符合ASTM A36,A307或同樣品.

7.高張力螺栓

除假固定及特別標示可使用JIS S8T螺栓外,本工程之螺栓接合使用符合JIS S10T規格之高張力螺栓,螺帽及墊片則為符合該規範之相稱材.除非特別標示外高張力螺栓均需依照AISC認可之安裝方式施作,以確保締結後之螺栓預張力於螺紋淨斷面達到70%最小張力強度之規定.使用於露,陽台,屋頂等外露構材之接合螺栓,除需使用S10T耐候型材質外,另需使用熱噴鋅鋅處理或不經酸洗之防蝕塗裝(膜厚90μ以上),以取代施工規範中所要求之熱浸鍍鋅.

8.焊材

電焊材除設計圖另有規定外,應依不同之鋼料及適用焊接型式,採用符合規範規定之相稱焊材,惟使用之焊接材料雖滿足規範對於焊材之要求,但如無法滿足鋼板之實際試驗抗拉強度,則應提昇焊接材料之強度等級與相合之焊接程序以符合結構安全的需要.此項之認定標準除參考焊材及鋼板材質證明書外,應以其適用位置之最大板厚及幾何形狀,依據AWS實際進行焊道之強度與衝擊能量(SMAW,GMAW,SAW,及FCAW之焊道應符合 27J at-18°c之要求)試驗,以確定焊接材料之可用性.

鋼材規格表 :

鋼材強度規格			鋼材使用時機
鋼材種類	最低降伏強度 (Fy) kgf/cm²	抗拉強度 (Fu) kgf/cm²	鋼構材種類
A36	2520	4060(min)	H型鋼 角鋼,槽鋼,T型鋼
A572, GR.50	3500	4550(min)	H型鋼
STK490	3200	5000(min)	圓鋼管
STKR490	3200	5000(min)	矩型鋼管
SN490 B	3300 鋼板厚≤40mm	5000(min)	H型鋼 組合箱型鋼柱
SN490 YC	3300 鋼板厚>40mm	5000(min)	H型鋼 組合箱型鋼柱

所有鋼構材相稱焊接最低規格
焊材規格
SMAW AWS A5.1 OR A5.5 E7015,E7016,E7018,E7028
SAW AWS A5.17 OR A5.23 F7XX-EXXX
GMAW AWS A5.18 ER70S-X
FCAW AWS A5.20 E7XT-X (EXCEPT -2,-3,-10,GS)

註: (1)本工程所有使用之鋼材除非特別說明外,其材質依構件種類分述如上.

(2)降伏比之定義為鋼材降伏試驗強度與抗拉試驗強度之比值,降伏試驗強度為應力應變圖中應力保持常數,而變形持續發生的鋼材應力強度,如應力應變圖中之降伏平台不明顯時,得以應變達到0.005時之應力定義為降伏應力.

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圖檔	10212-1
比例	
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

結構設計一般說明

圖號 S0-1

張號

「柱」的竹節鋼筋受拉搭接長度 (乙級搭接)

單位:cm,kgf/cm²

fy	fc'	鋼筋號數								
kgf/cm²	kgf/cm²	D10 (#3)	D13 (#4)	D16 (#5)	D19 (#6)	D22 (#7)	D25 (#8)	D29 (#9)	D32 (#10)	D36 (#11)
4200	210	–	72	90	108	159	182	206	231	257
	245	–	67	84	100	148	169	191	214	238
	280	–	63	78	94	138	158	178	200	222
	350	–	56	70	84	124	141	160	179	199
	420	–	51	64	77	113	129	146	163	182
	490	–	47	59	71	105	120	135	151	168

附註
1.柱筋之搭接需符合各種載重組合,除滿足下款者外,均需使用乙級拉力搭接(如上表),但仍適用受拉伸展修正係數.
2.柱筋應力不大於0.5fy ,且任一斷面搭接鋼筋面積比小於50%,其搭接位置至少鋼開_Ld者可用甲級搭接(即上表除1.3),但不得小於30cm.

「樑」的竹節鋼筋受拉搭接長度 (乙級搭接)

單位:cm,kgf/cm²

fy	fc'	鋼筋號數								
kgf/cm²	kgf/cm²	D10 (#3)	D13 (#4)	D16 (#5)	D19 (#6)	D22 (#7)	D25 (#8)	D29 (#9)	D32 (#10)	D36 (#11)
頂層拉力鋼筋(Lst)t										
4200	210	–	94	117	141	207	237	268	300	334
	245	–	87	109	130	192	219	248	278	309
	280	–	81	102	122	179	205	232	260	289
	350	–	73	91	109	161	184	207	233	259
	420	–	66	83	100	147	168	189	212	236
	490	–	62	77	92	136	155	175	197	219
一般拉力鋼筋(Lst)o										
4200	210	–	72	90	108	159	182	206	231	257
	245	–	67	84	100	148	169	191	214	238
	280	–	63	78	94	138	158	178	200	222
	350	–	56	70	84	124	141	160	179	199
	420	–	51	64	77	113	129	146	163	182
	490	–	47	59	71	105	120	135	151	168

「版」的竹節鋼筋受拉搭接長度 (乙級搭接)

單位:cm,kgf/cm²

fy	fc'	鋼筋號數							
kgf/cm²	kgf/cm²	D10 (#3)	D13 (#4)	D16 (#5)	D19 (#6)	D22 (#7)	D25 (#8)	D29 (#9)	D32 (#10)
頂層拉力鋼筋									
2800	210 | 490	30	–	–	–	–	–	–	–
4200	210	42	68	100	136	136	177	227	285
	245	39	63	92	126	126	164	210	264
	280	37	59	86	118	118	154	196	247
	350	33	53	77	105	105	137	176	221
	420	30	48	71	96	96	126	160	202
	490	30	45	65	89	89	116	149	187
一般拉力鋼筋									
2800	210 | 490	30	–	–	–	–	–	–	–
4200	210	33	52	77	104	105	137	175	220
	245	30	48	71	97	97	126	162	203
	280	30	45	67	91	91	118	151	190
	350	30	41	60	81	81	106	135	170
	420	30	37	54	74	74	97	124	155
	490	30	34	50	69	69	90	114	144

「牆」的竹節鋼筋受拉搭接長度 (乙級搭接)

單位:cm,kgf/cm²

fy	fc'	鋼筋號數							
kgf/cm²	kgf/cm²	D10 (#3)	D13 (#4)	D16 (#5)	D19 (#6)	D22 (#7)	D25 (#8)	D29 (#9)	D32 (#10)
2800	210 | 490	30	–	–	–	–	–	–	–
4200	210	33	52	77	104	105	137	175	220
	245	30	48	71	97	97	126	162	203
	280	30	45	67	91	91	118	151	190
	350	30	41	60	81	81	106	135	170
	420	30	37	54	74	74	97	124	155
	490	30	34	50	69	69	90	114	144

附註
1.(a)梁構材使用本表時,鋼筋之最小保護層厚及鋼筋淨間距不小於1.0db.
(b)當梁構材鋼筋最小保護層厚≥4cm且搭接處鋼筋淨間距大於2.0db,梁筋搭接位置符合圖S1.02大梁鋼筋配置標準圖時,D22或較大梁鋼筋之搭接長度可依表列值除以1.25計算.
2.版,牆構材使用本表時,版,牆主筋心到心間距不小於10cm,且鋼筋(D10~D19)之最小淨保護層厚度≥2.0cm;鋼筋(D22~D32)之最小淨保護層厚度≥4.0cm.
3.若符合下列條件時,上表值可再乘下列係數.
a.輕質混凝土 1.30
b.鋼筋塗佈環氧樹脂者 1.20
4.所謂頂層鋼筋即水平鋼筋下混凝土一次澆置厚度大於30cm者.

柱、樑、版、牆之搭接長度

「柱」的竹節鋼筋受拉伸展長度(Ld)

單位:cm,kgf/cm²

fy	fc'	鋼筋號數									
kgf/cm²	kgf/cm²	D10 (#3)	D13 (#4)	D16 (#5)	D19 (#6)	D22 (#7)	D25 (#8)	D29 (#9)	D32 (#10)	D36 (#11)
4200	210	–	56	70	84	123	140	159	178	198
	245	–	52	64	77	114	130	147	165	183
	280	–	48	60	72	106	122	137	154	171
	350	–	43	54	65	95	109	123	138	153
	420	–	40	49	59	87	99	112	126	140
	490	–	37	46	55	81	92	104	117	130

「樑」的竹節鋼筋受拉伸展長度 (Ld)

單位:cm,kgf/cm²

fy	fc'	鋼筋號數									
kgf/cm²	kgf/cm²	D10 (#3)	D13 (#4)	D16 (#5)	D19 (#6)	D22 (#7)	D25 (#8)	D29 (#9)	D32 (#10)	D36 (#11)
頂層拉力鋼筋 (L dt)										
4200	210	–	72	90	108	159	182	206	231	257
	245	–	67	84	100	148	169	191	214	238
	280	–	63	78	94	138	158	178	200	222
	350	–	56	70	84	124	141	160	179	199
	420	–	51	64	77	113	129	146	163	182
	490	–	47	59	71	105	120	135	151	168
一般拉力鋼筋 (L do)										
4200	210	–	56	70	84	123	140	159	178	198
	245	–	52	64	77	114	130	147	165	183
	280	–	48	60	72	106	122	137	154	171
	350	–	43	54	65	95	109	123	138	153
	420	–	40	49	59	87	99	112	126	140
	490	–	37	46	55	81	92	104	117	130

「版」的竹節鋼筋受拉伸展長度(Ld)

單位:cm,kgf/cm²

fy	fc'	鋼筋號數								
kgf/cm²	kgf/cm²	D10 (#3)	D13 (#4)	D16 (#5)	D19 (#6)	D22 (#7)	D25 (#8)	D29 (#9)	D32 (#10)	D36 (#11)
頂層拉力鋼筋										
2800	210 | 490	30	–	–	–	–	–	–	–	–
4200	210	33	52	77	104	105	137	175	220	279
	245	30	48	71	97	97	126	162	203	258
	280	30	45	67	91	91	118	151	190	241
	350	30	41	60	81	81	106	135	170	216
	420	30	37	54	74	74	97	124	155	198
	490	30	34	50	69	69	90	114	144	184
一般拉力鋼筋										
2800	210 | 490	30	–	–	–	–	–	–	–	–
4200	210	30	40	59	80	81	105	134	169	215
	245	30	37	55	75	75	97	124	157	199
	280	30	35	51	70	70	91	116	146	186
	350	30	31	46	62	63	82	104	131	167
	420	30	30	42	57	57	74	95	120	153
	490	30	30	39	53	53	69	88	111	142

「牆」的竹節鋼筋受拉伸展長度(Ld)

單位:cm,kgf/cm²

fy	fc'	鋼筋號數							
kgf/cm²	kgf/cm²	D10 (#3)	D13 (#4)	D16 (#5)	D19 (#6)	D22 (#7)	D25 (#8)	D29 (#9)	D32 (#10)
2800	210 | 490	30	–	–	–	–	–	–	–
4200	210	30	40	59	80	81	105	134	169
	245	30	37	55	75	75	97	124	157
	280	30	35	51	70	70	91	116	146
	350	30	31	46	62	63	82	104	131
	420	30	30	42	57	57	74	95	120
	490	30	30	39	53	53	69	88	111

5.鋼筋伸展長度除本表列述者外,可依實際狀況參照設計規範5.3節詳細計算各別之伸展長度.
6.本表所列搭接長度為乙級搭接長度,若符合規範5.16.1之甲級搭接標準,上表值可除以1.3,(即1.0Ld),但不得小於設計規範15.6.4節相關規定及30cm.
(甲級搭接:在規定搭接長度內鋼筋之使用量至少為分析值之兩倍,且搭接鋼筋面積百分比小於50%時.)
7.經依現場狀況檢核搭接長度後,其施工性能不佳者,應採用其它之錨定或續接(如續接器或銲接等)方式.

柱、樑、版、牆之伸展長度

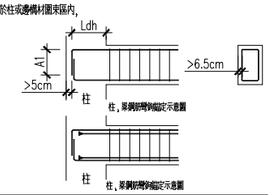
CNS 竹節鋼筋重量及主筋標準彎鉤延伸長

具標準彎鉤竹節鋼筋之受拉伸展長度 (Ldh)

標準直徑	直徑db	斷面積	重量	主筋延伸長	fy=2800						單位:cm,kgf/cm²
(號數)	(mm)	(cm²)	(kgf/m)	90°–(A1)	f'c=210	f'c=245	f'c=280	f'c=350	f'c=420	f'c=490	
D10(#3)	9.53	0.713	0.560	12	15	15	15	15	15	15	

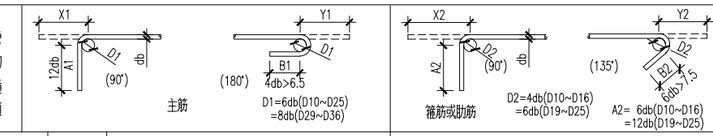
標準直徑	直徑db	斷面積	重量	主筋延伸長	fy=4200						單位:cm,kgf/cm²
(號數)	(mm)	(cm²)	(kgf/m)	90°–(A1)	f'c=210	f'c=245	f'c=280	f'c=350	f'c=420	f'c=490	
D10(#3)	9.53	0.713	0.560	12	17	16	15	15	15	15	
D13(#4)	12.7	1.267	0.994	16	23	21	20	18	16	15	
D16(#5)	15.9	1.986	1.560	19	28	26	24	22	20	19	
D19(#6)	19.1	2.865	2.250	23	34	31	29	26	24	22	
D22(#7)	22.2	3.871	3.040	27	39	36	34	30	28	26	
D25(#8)	25.4	5.067	3.980	31	45	41	39	35	32	29	
D29(#9)	28.7	6.469	5.080	35	50	47	44	39	36	33	
D32(#10)	32.2	8.143	6.390	39	56	52	49	44	40	37	
D36(#11)	35.8	10.070	7.900	43	63	58	54	49	45	41	

附註
1.使用本表時,其彎鉤鋼筋側面保護層須大於6.5cm ; 90° 彎鉤直線延長段應置於柱或邊構材圍束區內,且保護層大於5cm,若有下列條件時,上表值再乘該項係數.
a.不能符合上述基本條件者 1.3
b.輕質混凝土 1.3
c.鋼筋塗佈環氧樹脂者 1.2
2.梁在不連續支承上,應以標準彎鉤錨定之.
3.不符合本表條件或情況特殊者,另依設計規範5.6及15.6.4相關規定計算之.
4.梁縱向鋼筋終止於柱內時,應延伸至柱圍束核心區之另一面.
5.梁之縱向鋼筋終止於柱內時,第二層鋼筋送審核可後得以下端錨定取代彎鉤,錨定深度依設計規範及相關規定辦理.



標準彎鉤及伸展長度(Ldh)

標準彎鉤



標準直徑	直徑db	主筋					箍筋或肋筋				
(號數)	(mm)	A1 (cm)	B1 (cm)	D1 (cm)	X1 (cm)	Y1 (cm)	A2 (cm)	B2 (cm)	D2 (cm)	X2 (cm)	Y2 (cm)
D10(#3)	9.53	12	6.5	5.8	15.5	10.5	6.0	7.5	3.9	9.0	10.5
D13(#4)	12.7	16	6.5	7.7	20.5	12.0	8.0	8.0	5.1	11.5	11.5
D16(#5)	15.9	19	6.5	9.6	25.5	13.0	10.0	10.0	6.4	14.5	14.5
D19(#6)	19.1	23	8.0	11.5	31.0	15.5	23.0	11.5	11.5	31.0	19.5
D22(#7)	22.2	27	9.0	13.4	35.5	18.0	27.0	13.5	13.4	35.5	22.5
D25(#8)	25.4	31	10.5	15.3	41.0	20.5	31.0	15.5	15.3	41.0	25.5
D29(#9)	28.7	35	11.5	23.0	49.0	26.0	–	–	–	–	–
D32(#10)	32.2	39	13.0	25.8	55.0	29.0	–	–	–	–	–
D36(#11)	35.8	43	14.5	28.7	61.0	32.5	–	–	–	–	–

附註
1.採用本圖之伸展長度時,其標準彎鉤之曲率半徑及延伸長均應符合上述標準.
2.鋼筋受壓時不計彎鉤之伸展效應.

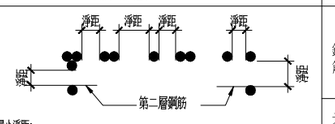
鋼筋最小保護層厚

單位:cm

狀況		版,牆,格柵及牆版	無樑版	剪力牆	樑,柱及基腳(含基礎版)	薄殼及摺板
不受風雨侵襲且不接觸土壤者	≤ D16	2.0	4.0	2.0	4.0	1.5
	D19~D36	2.0	4.0	4.0	4.0	2.0
受風雨侵襲或與土壤接觸者	≤ D16	4.0	–	4.0	4.0	4.0
	D19~D36	5.0	–	5.0	5.0	5.0
直接澆置於土壤或岩石或經常與水及土壤接觸者		7.5	–	–	7.5	–
土壤接觸者與海水或腐蝕性環境接觸		10.0	–	–	10.0	–

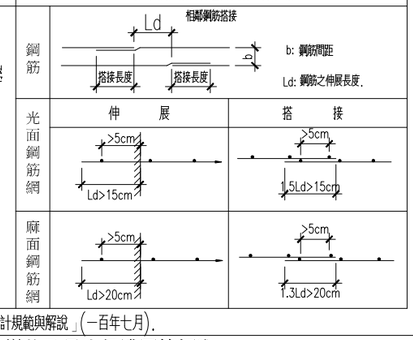
附註
1.鋼筋保護層為自鋼筋外面至混凝土表面之厚度,除另有規定外悉依本表規定.
2.保護層之量測:有橫向鋼筋者量至箍筋表面,無橫向鋼筋者量至外層主鋼筋之表面.
3.受風雨侵襲情況係指直接暴露於溫濕度變化,但樑,柱,薄殼底面並不認為直接暴露,除非承受乾濕度交替變化作用者.
4.本表適用於現場澆置之非預力混凝土.

鋼筋間淨距標準圖



附註:
1.鋼筋間最小淨距:
撓曲構材(如樑版)不得小於2.5cm或1.0db,1.0D'或相當粒料徑之1.33倍.
受壓構材(如柱牆)一不得小於4.0cm或1.5db,1.5D'或相當粒料徑之1.33倍.
db為鋼筋直徑, D'為束筋相當直徑.
2.第二層鋼筋與第一層鋼筋上下對齊,不得錯開且層間淨距不得小於2.5cm,不得大於設計值
3.鋼筋捆紮成束筋時,其相當直徑 D'如下:
二根一束 D' = 1.4 db
三根一束 D' = 1.7 db
四根一束 D' = 2.0 db

相鄰鋼筋搭接與受拉鋼線網伸展,搭接



附註:本圖標準所指之設計規範為內政部營建署頒布之「混凝土工程設計規範與解說」(一百年七月).

標準彎鉤及最小保護層等標準

田中央聯合建築師事務所
宜蘭市建業路428號
TEL 03-9253725 FAX 03-9253980
E-mail:fieldoffice@fieldoffice.com.tw

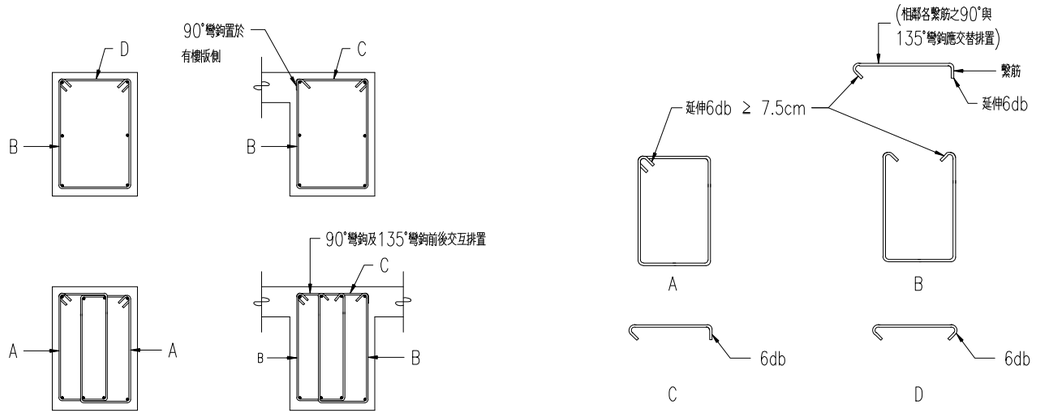
圖檔	10212-1
比例	
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

鋼筋與標準彎鉤詳圖

圖號 S1-1

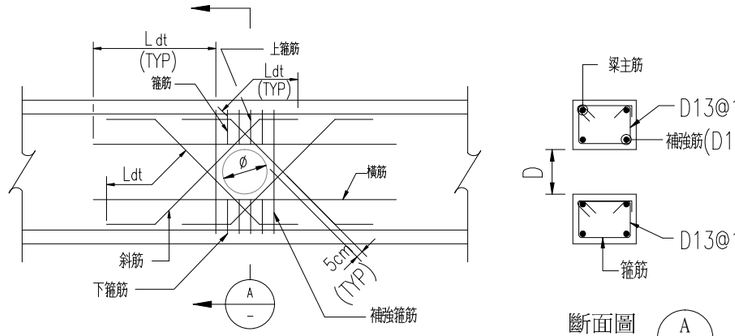
張號

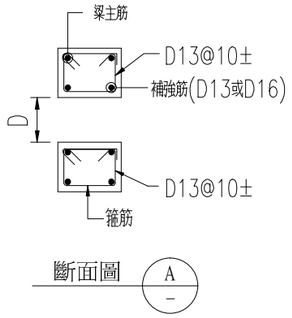


附註:

1. C,D型箍筋之135°之彎鉤可視主筋配置情形改用180°彎鉤.

梁閉合箍筋標準圖



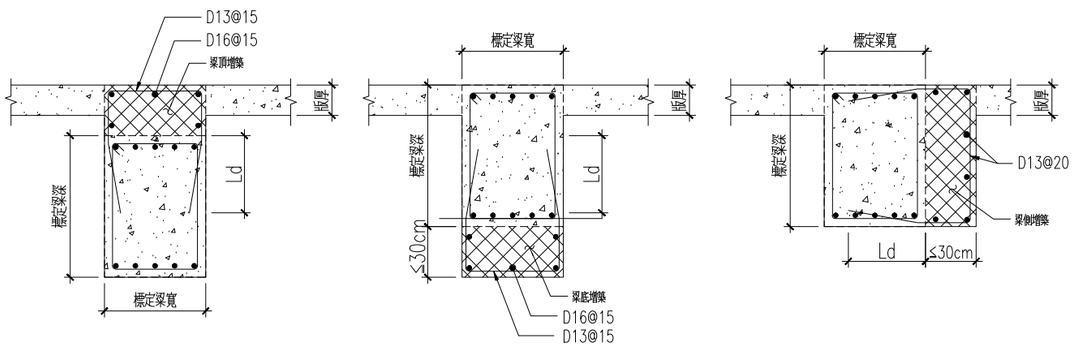


補強筋 \ 開口直徑	ø<100	100≤ø<200	200≤ø<300	300≤ø<400
補強箍筋	4-D13	4-D13	4-D16	4-D19
斜筋	8-D13	8-D13	8-D16	8-D19
橫筋	-	4-D13	4-D16	4-D19
上下箍筋	-	3-D13	4-D13	6-D13

附註:

1. D=穿孔孔徑(單位:cm).
2. 穿孔孔徑不得大於1/3梁深.
3. 穿孔不可在同一斷面垂直排列.
4. D<10cm,不得於距柱面1.5倍梁深範圍內穿孔.
   D≥10cm,不得於距柱面2倍梁深範圍內穿孔.
5. 穿孔應避開梁銜接處,距銜接梁面0.5倍梁深內不得開孔.
6. 開孔小於5cm且小於1/10梁深不需補強
   (開孔位置間距仍須符合相關規定).
7. 穿孔水平排列須相距3D或30cm以上.
8. 各補強鋼筋(箍筋除外),須自鋼筋交點
   起有足夠伸展長度.
9. 穿孔外緣與鋼筋距離須滿足相關保護
   層厚度之需求.

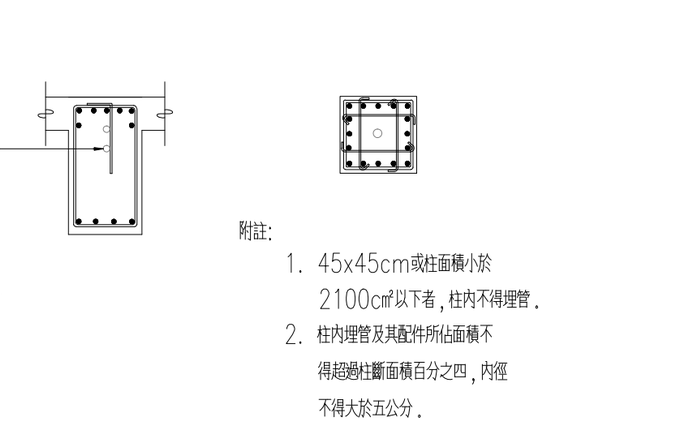
梁穿孔補強



附註:

1. 由建築設計需求增大尺寸詳建築圖.
2. 當建築圖說與結構圖說梁尺寸不同
   時,以書面通知建築師.
3. 增築尺寸大於30cm以上者應採空心
   方式施作,施作方式應送審核准後方可
   施作.

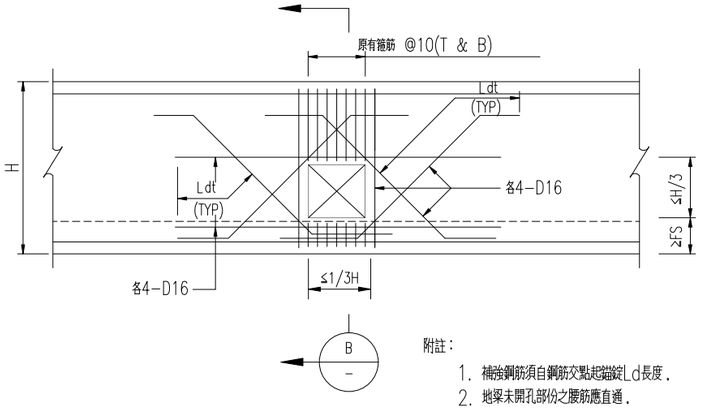
梁增築配筋標準圖

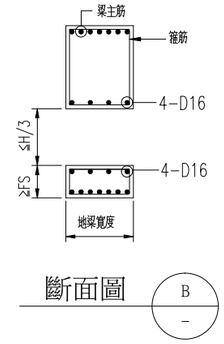


附註:

1. 45x45cm或柱面積小於
   2100cm²以下者,柱內不得埋管.
2. 柱內埋管及其配件所佔面積不
   得超過柱斷面積百分之四,內徑
   不得大於五公分.

柱、梁腹內部放置水電配管配置示意圖





附註:

1. 補強鋼筋須自鋼筋交點起錨設Ld長度.
2. 地梁未開孔部份之腰筋應直通.
3. 補強鋼筋不得少於原有主筋被開口截斷之鋼筋量.
   FS:基礎版厚度

地梁穿孔補強詳圖

田中央聯合建築師事務所
宜蘭市建業路428號
TEL 03-9253725 FAX 03-9253980
E-mail:fieldoffice@fieldoffice.com.tw

圖檔	10212-1
比例	
日期	
修正	

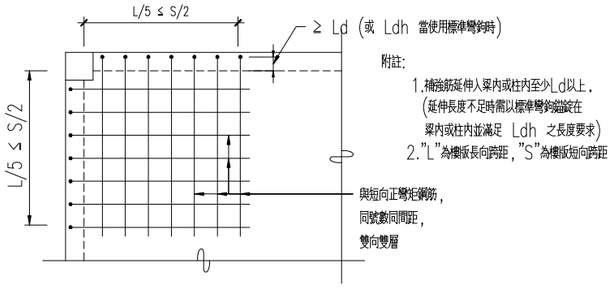
宜蘭除食儲式資源再生廠設置工程第一期工程
第一次變更設計

標箍筋與穿孔補強詳圖

圖號 S1-2

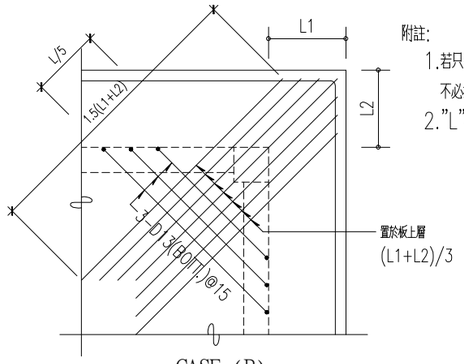
張號

樓版角隅補強標準圖



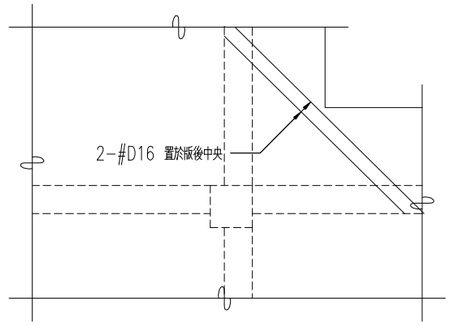
附註:
1.補強筋延伸入梁內或柱內至少Ld以上，
(延伸長度不足時需以標準彎鉤錨錠在
梁內或柱內並滿足 Ldh 之長度要求)
2."L"為樓版長向跨距，"S"為樓版短向跨距

CASE (A)



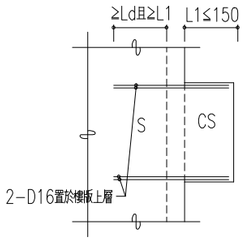
附註:
1.若只有單邊有版外挑時，則上層補強筋
不必挑出，彎入柱及梁內同左圖。
2."L"為樓版長向跨距。

CASE (B)

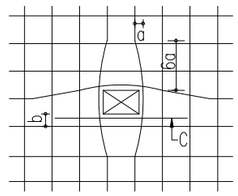


CASE (C)

懸臂版補強配筋標準圖



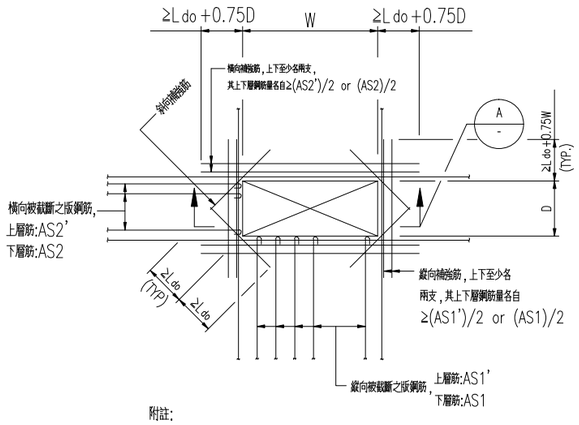
樓版開口補強標準圖(開口週邊有牆載重，不適用本標準圖)



附註:
1. 版開口較小時，主筋盡可能不予切斷向兩側分開成緩和曲線，其斜率為1:6(如圖中a與6a)
2. 開口距主筋不得大於5cm若大於5cm(如圖中之b)，則需加補強筋(如圖中之C)
3. C之補強筋號數同主筋，兩邊延伸開口以外至少Ld
4. 版鋼筋單排時，補強筋為單排，版鋼筋雙排時，補強筋為雙排。

開口長邊 ≤ 30cm

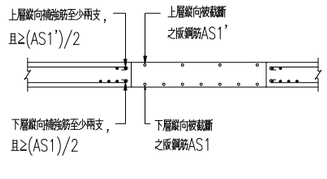
CASE (A)



附註:
1. 開口較大，版筋需要切斷時，補強如上圖。
2. 斜向補強筋用1支較版主鋼筋大1號之鋼筋，置於版中央。
3. 縱，橫兩向補強鋼筋量，不得少於各向版原有主筋被開口截斷之鋼筋量。

30cm < 開口長邊 ≤ 80cm

CASE (B)

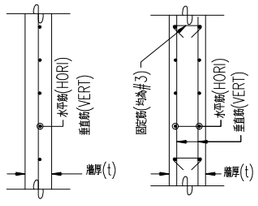


SECTION A/-

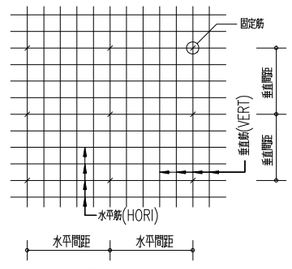
附註:
如果是無梁版，則開孔之位置與大小之規定如下所述:
1. 兩中間帶之相交區內可有任何大小之開孔，惟格間鋼筋須維持未開孔時之需要量。
2. 兩柱列帶相交區內開孔之每向寬度不得大於柱列帶寬度之1/8。
3. 柱列帶與中間帶相交區內每向被開孔截斷之鋼筋量不得大於該向所需鋼筋量之1/4。

樓版開口補強標準圖(開口週邊有牆載重，不適用本標準圖)

牆編號	牆厚(公分)		單排	雙排
W10 W12	10 12	VERT HORI.	D10@10 D10@15	
W15 W16	15 16	VERT HORI.		D10@15 雙面 D10@20 雙面
W18 W20	18 20	VERT HORI.		D13@20 雙面 D13@20 雙面
W25	25	VERT HORI.		D13@15 雙面 D13@20 雙面
W30	30	VERT HORI.		D13@15 雙面 D13@15 雙面



單排配筋(剖面)　雙排配筋(剖面)

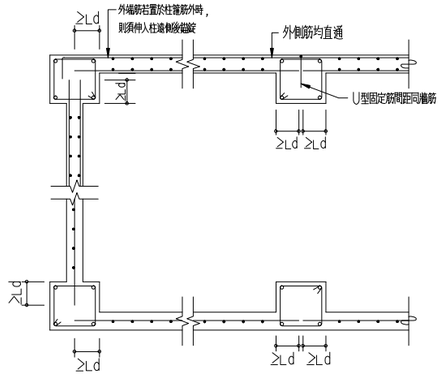


固定筋立面

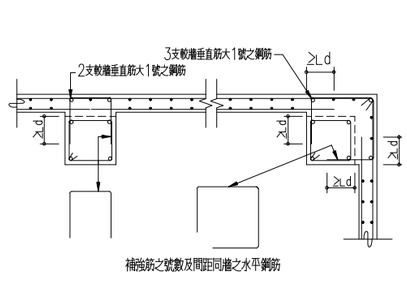
附註:
1. 固定筋之水平間距為垂直筋間距之5倍，垂直間距為水平筋間距之4倍。
2. 牆垂直筋與水平筋端部均須埋入梁或柱內至少L d之長度。
3. 牆厚15cm(含)以上之牆，若位於筏基頂版上時，應延伸入筏基版內。
4. 牆淨高大於30倍牆厚時不適用本表。

非結構牆配筋標準圖(擋土牆，剪力牆，蓄水池及地下室之外牆不適用本表配筋)

非結構牆與柱接合詳圖
(非結構牆之必要隔離縫另詳結構設計圖)

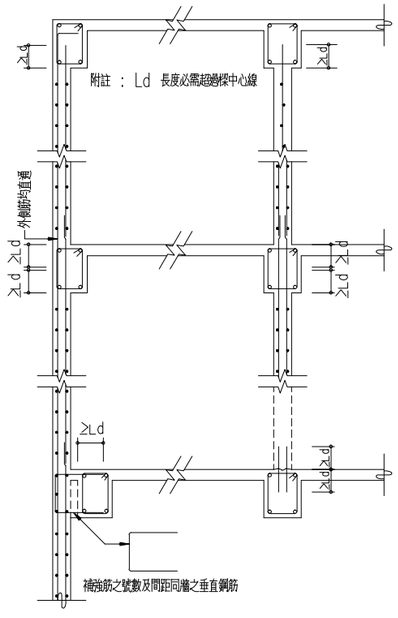


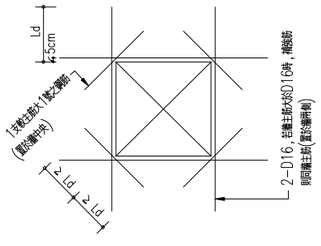
CASE (A)



CASE (B)

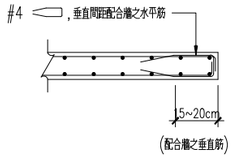
非結構牆與梁接合詳圖
(非結構牆之必要隔離縫另詳結構設計圖)





附註：牆主筋為單排時，補強筋亦為單排，將2-D16改為1-D16而置於牆中央牆主筋為雙排時，補強筋亦為雙排，如圖所示。

非結構牆開口補強配筋標準圖



非結構牆端部補強標準圖

田中央聯合建築師事務所
宜蘭市建業路428號
TEL 03-9253725 FAX 03-9253980
E-mail:fieldoffice@fieldoffice.com.tw

圖檔	10212-1
比例	
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

版與牆配筋詳圖

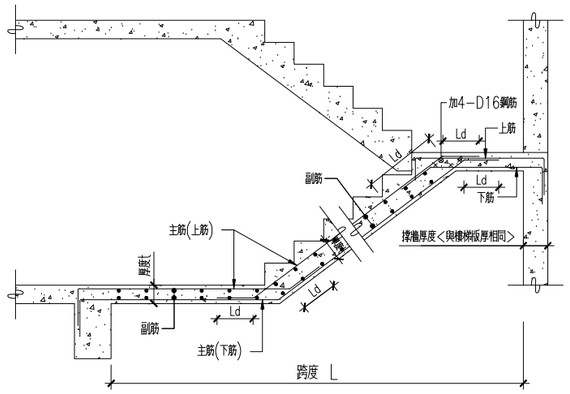
圖號 S1-3

張號

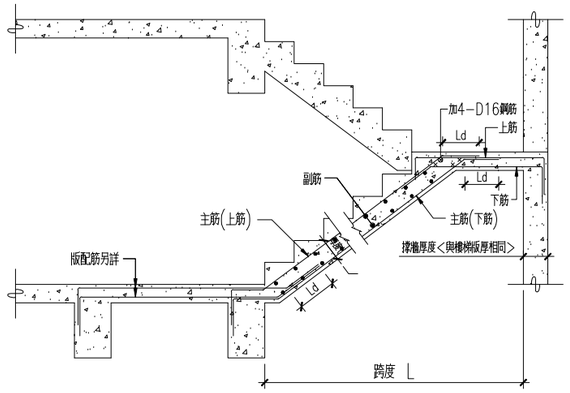
樓梯厚度及配筋表

跨 度 L	厚 度 t	主筋 (上,下筋)	副 筋
L<4M	15cm	#4@10	#4@20
4M<L<4.5M	18cm	#4@10	#4@20
4.5M<L<5.0M	20cm	#4@10	#4@20
5.0M<L<5.5M	22cm	#5@15	#4@20
5.5M<L<6.0M	25cm	#5@15	#4@20
6.0M<L<7.0M	28cm	#5@10	#4@20

折版式樓梯 <一>



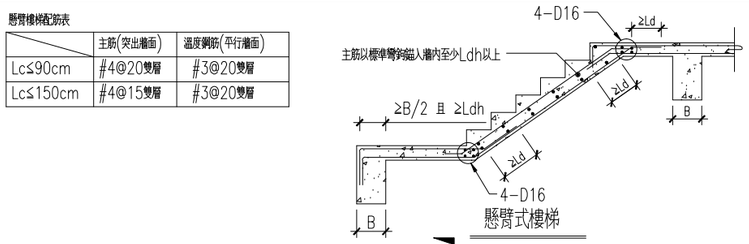
折版式樓梯 <二>

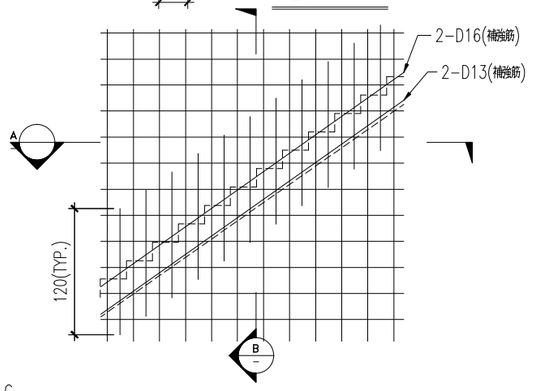


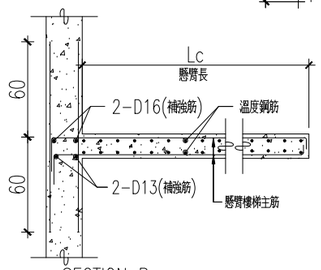
簡支樓梯補強配筋標準圖

懸臂樓梯配筋表

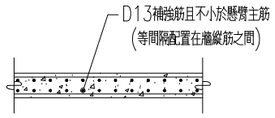
	主筋(突出牆面)	溫度鋼筋(平行牆面)
Lc≤90cm	#4@20雙層	#3@20雙層
Lc≤150cm	#4@15雙層	#3@20雙層





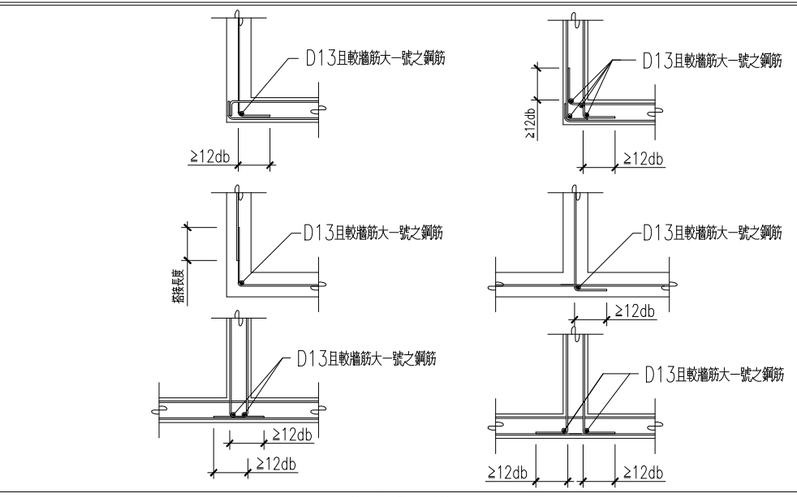


SECTION B

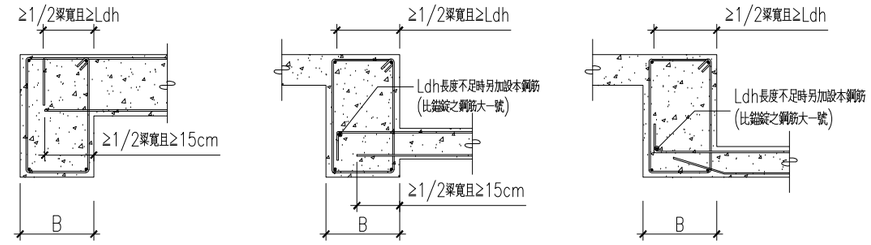


SECTION A

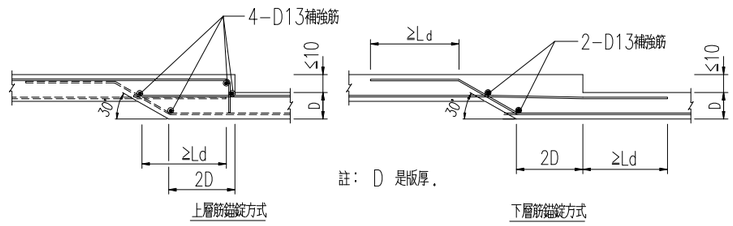
懸臂式樓梯撐牆補強配筋標準圖



牆角隅補強

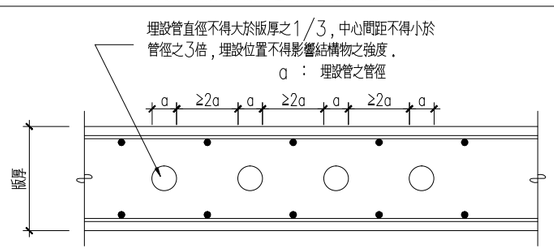


版筋之錨定

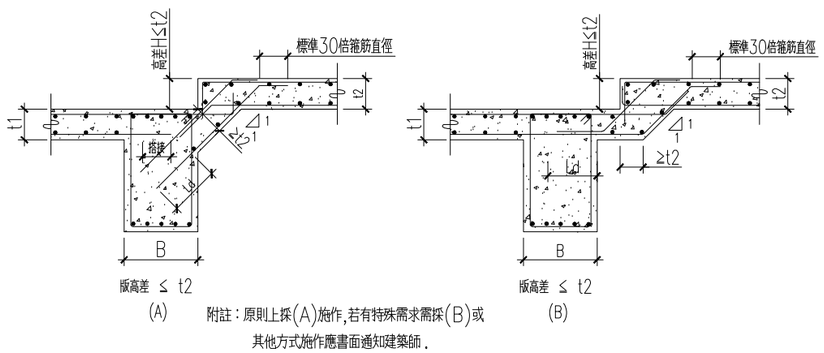


註: D 是版厚.

樓版內埋設水電配管示意圖

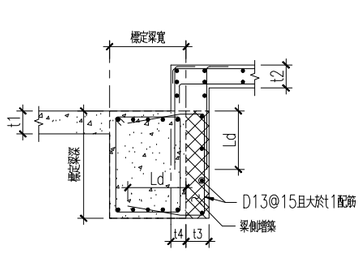


高差版補強配筋標準圖(一)(版高差 ≦ 10cm)

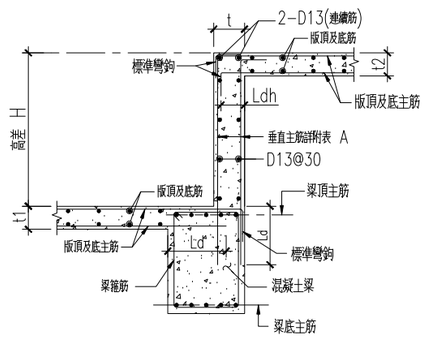


附註:原則上採(A)施作,若有特殊需求需採(B)或其他方式施作應書面通知建築師.

梁側高差版補強配筋標準圖(二)(10cm<版高差 ≦ t2)



t3 + t4 ≥ t2, 且 t3≥10cm



高差 H cm	牆厚 T cm	垂直主筋 cm
t2<H≤50	20	D13@20
50<H≤100	25	D16@20

註:H>100另詳.

附表 A

梁側高差版補強配筋標準圖(三)(版高差 > t2)

田中央聯合建築師事務所
宜蘭市建業路428號
TEL 03-9253725 FAX 03-9253980
E-mail:fieldoffice@fieldoffice.com.tw

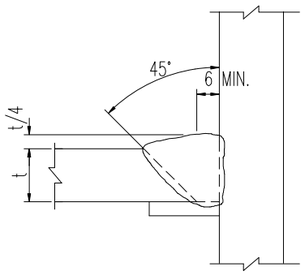
圖檔	10212-1
比例	
日期	
修正	

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

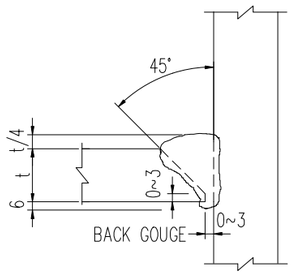
版與牆配筋詳圖(二)

圖號	張號
S1-4	

WT"A" GROOVE

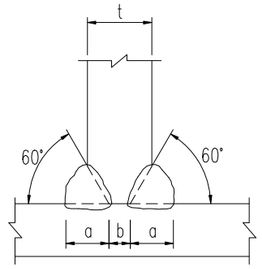


WT"B" GROOVE



WT"C" FILLET

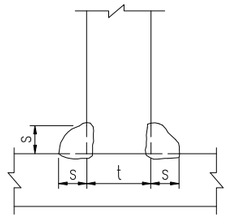
t>19mm



a=0.67t
b=0.33t

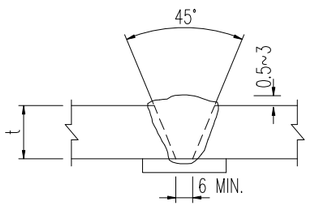
WT"D" FILLET

t≤19mm

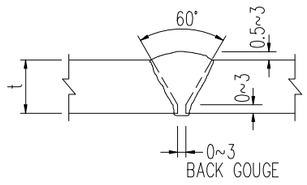


t	S
19	14
18	13
16	12
15	11
14	10
13	10
12	9
11	8
10	8
9	7
8	6
7	5
6	5

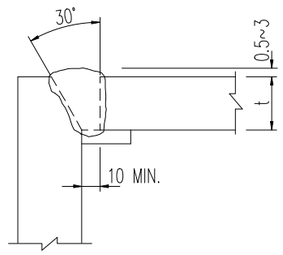
WT"E" GROOVE



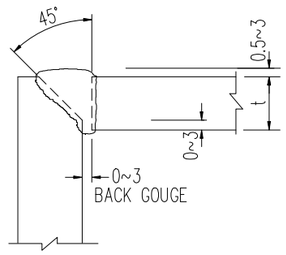
WT"F" GROOVE



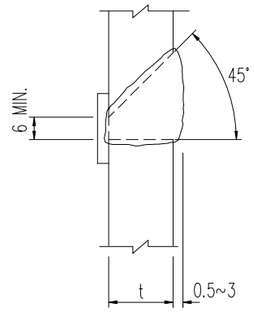
WT"G" GROOVE



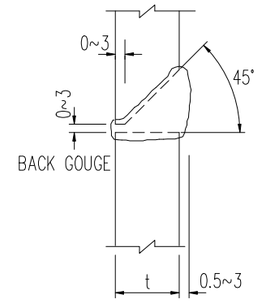
WT"H" GROOVE



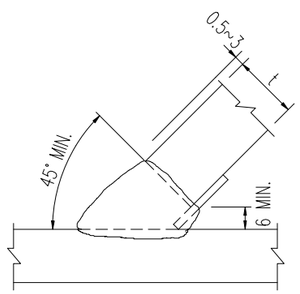
WT"J" GROOVE



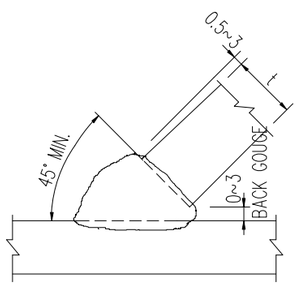
WT"K" GROOVE



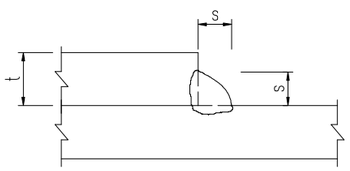
WT"L" GROOVE



WT"M" GROOVE

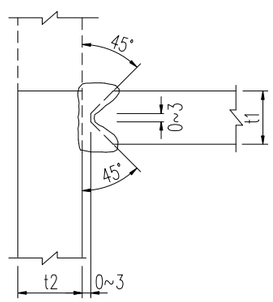


WT"N" FILLET

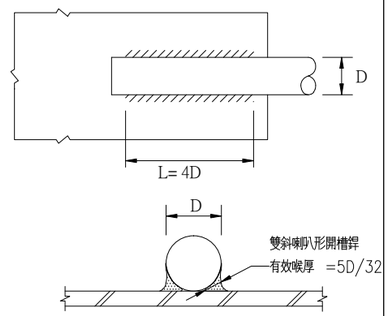


t=6mm s=t
t≥7mm s=t-1

WT"P" GROOVE



WT"Q" GROOVE



註:1.材質應採可銲鋼材.
2.圓鐵或鋼筋降伏強度 Fy若非2400kgf/cm²
,圖示之長度應修正Fy/2400倍.

說明:

1. WT代表焊接型式.
2. 除有特別註明外,承包商須依本圖所示之焊接需求施工.
3. 本設計圖所用焊接符號均依據. AISC "MANUAL OF STEEL CONSTRUCTION" 9th EDITION.

NOTE:

1. WT INDICATE WELDING TYPE.
2. CONTRACTOR SHALL FOLLOW THIS TYPICALWELDING DETAILS (U.N.O.).
3. ALL WELDING SYMBOLES ARE REFERED TO AISC "MANUAL OF STEEL CONSTRUCTION" 9TH EDITION.

田中央聯合建築師事務所
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TEL 03-9253725 FAX 03-9253980
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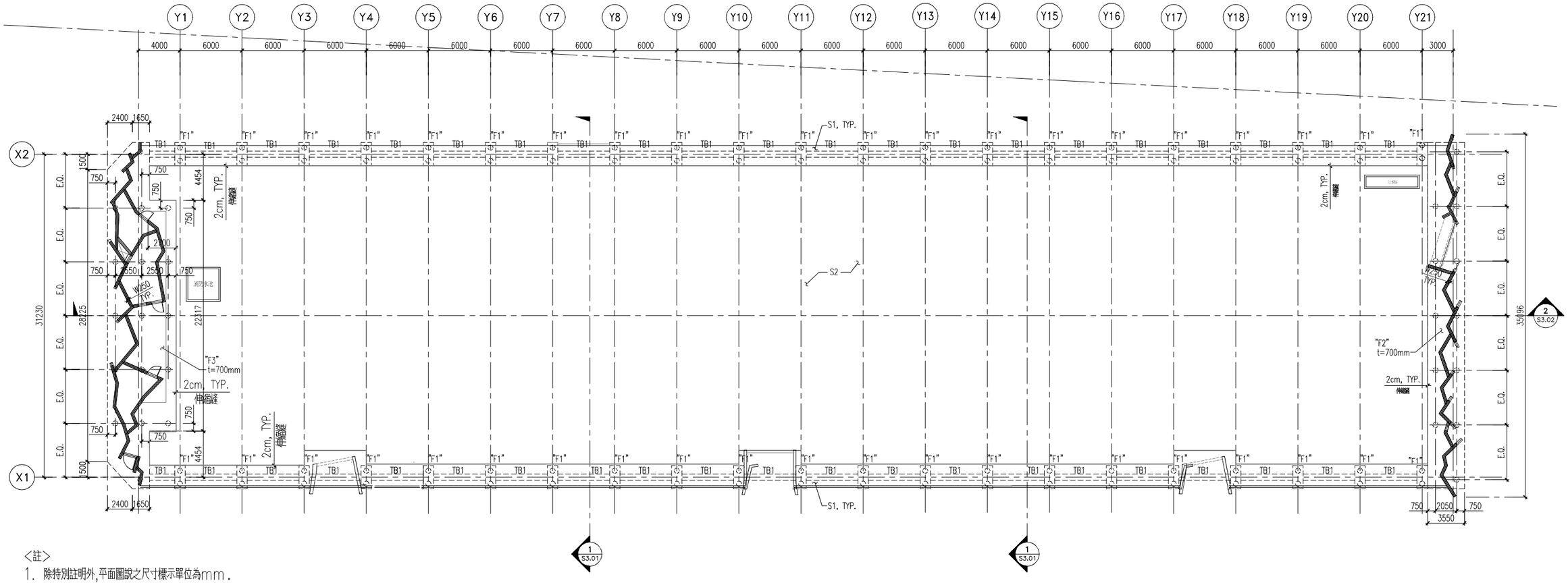
圖檔 10212-1
比例
日期
修正

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

焊接標準圖

圖號 S1-5

張號



<註>

1. 除特別註明外,平面圖說之尺寸標示單位為mm.
2. 樓版邊緣之實際位置應參照建築圖說.
3. 樓版開孔位置應參照建築圖說.
4. 除特別註明外,小梁位置設於樓版均分處,樓版高低差周邊範圍或切齊RC牆體邊緣處.
5. RC牆位置另詳建築圖.

1 S2.01 一層結構平面圖(變更)

S:1/200

<圖例說明>

GL.	距地表之高程		樓版下方柱
	樓版下方梁		樓版上方柱
	反梁		樓版開孔
	樓版高低差	ELEV.	電梯開孔
	斜坡向下	TYP.	標準的
	斜坡向上	SIM.	相似的

桿件尺寸表(mm):

桿件名稱	編號	斷面尺寸
梁	TB1	600x600
基礎	F1	1000x2250x700
	F2	另詳
	F3	另詳
版	S1,S2	200

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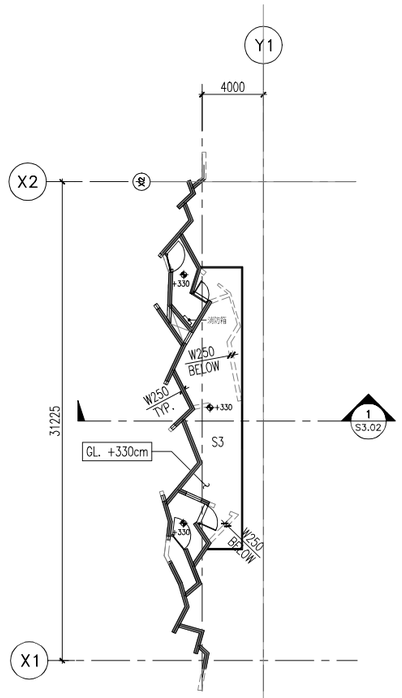
圖檔 10212-1
比例 A1:1/100 A3:1/200
日期
修正

宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

一層結構平面圖

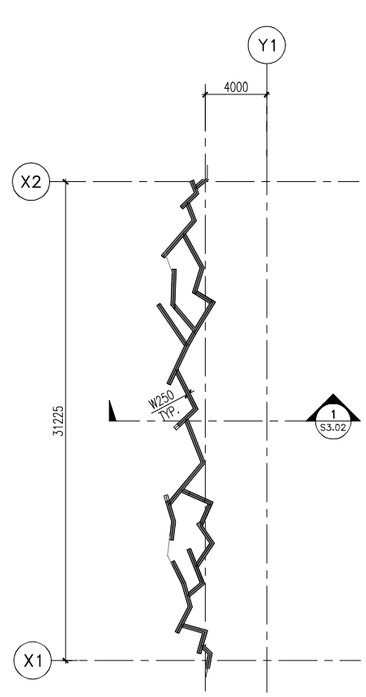
圖號 S2-1

張號



1 S2.02 一層夾層結構平面圖(變更)

S:1/200

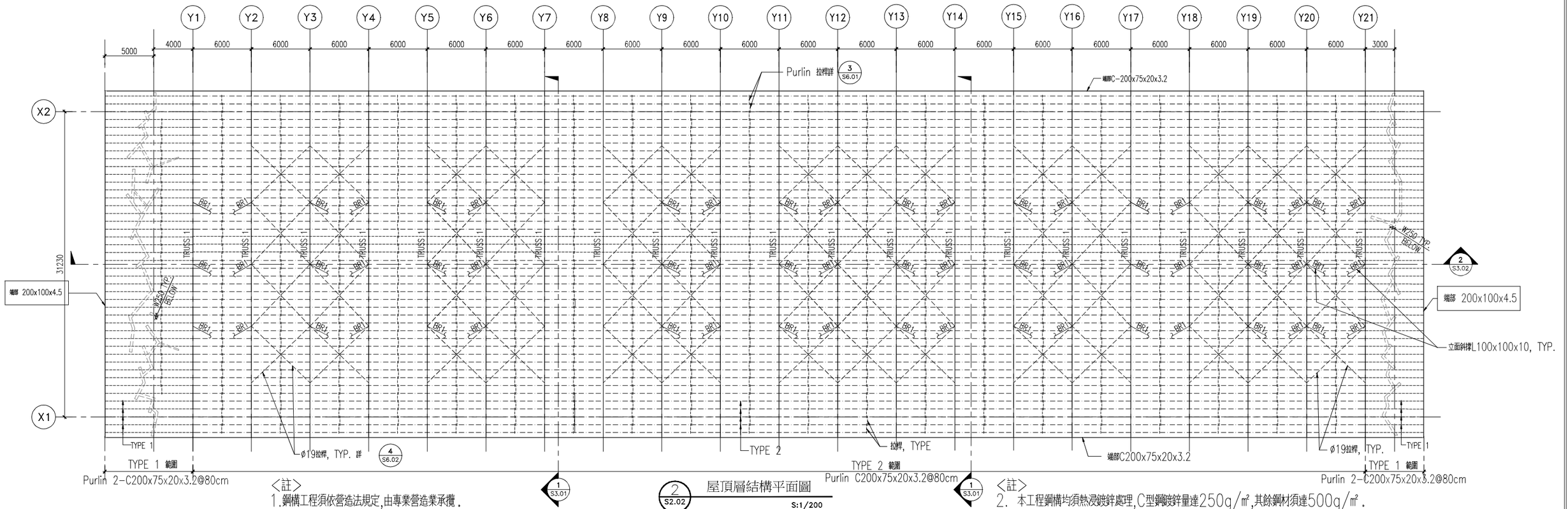


2 S2.02 一層夾頂結構平面圖(變更)

S:1/200

焊件尺寸表(mm):

焊件名稱	編號	斷面尺寸
版	S1	200
	S3	400



2 S2.02 屋頂層結構平面圖

S:1/200

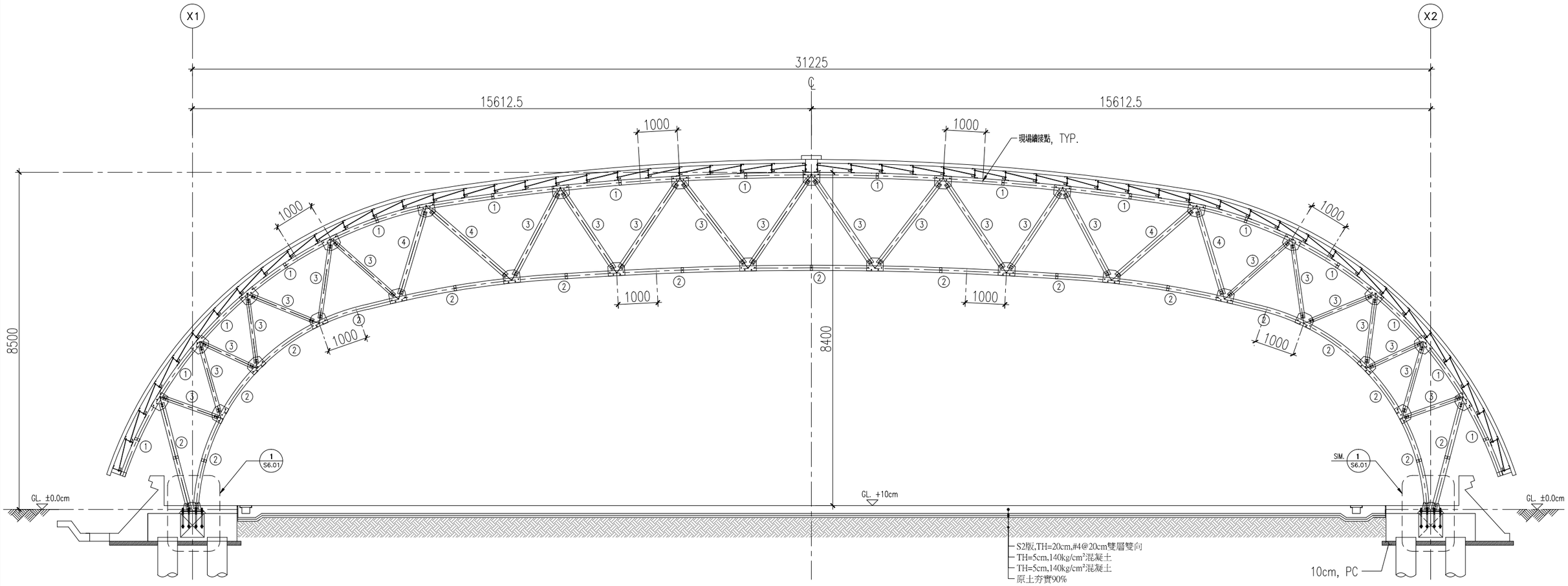
<註>

1.鋼構工程須依營造法規定,由專業營造業承攬.

<註>

2. 本工程鋼構均須熱浸鍍鋅處理,C型鋼鍍鋅量達250g/㎡,其餘鋼材須達500g/㎡.

田中央聯合建築師事務所 宜蘭市建業路428號 TEL 03-9253725 FAX 03-9253980 E-mail:fieldoffice@fieldoffice.com.tw	圖檔 10212-1 比例 A1:1/100 A3:1/200 日期 修正	宜蘭縣倉儲式資源再生廠設置工程第一期工程 第一次變更設計 一層夾層及屋頂層結構平面圖	圖號 S2-2	張號



1 S3.01 構架剖面詳圖(一)

TRUSS 1 S:1/50

	編號	SSR寸(mm)	材質
鋼梁	①	2L-130x130x12	A36或同等級
	②	2L-125x90x10	A36或同等級
	③	L-125x90x10	A36或同等級
	④	L-150x90x12	A36或同等級

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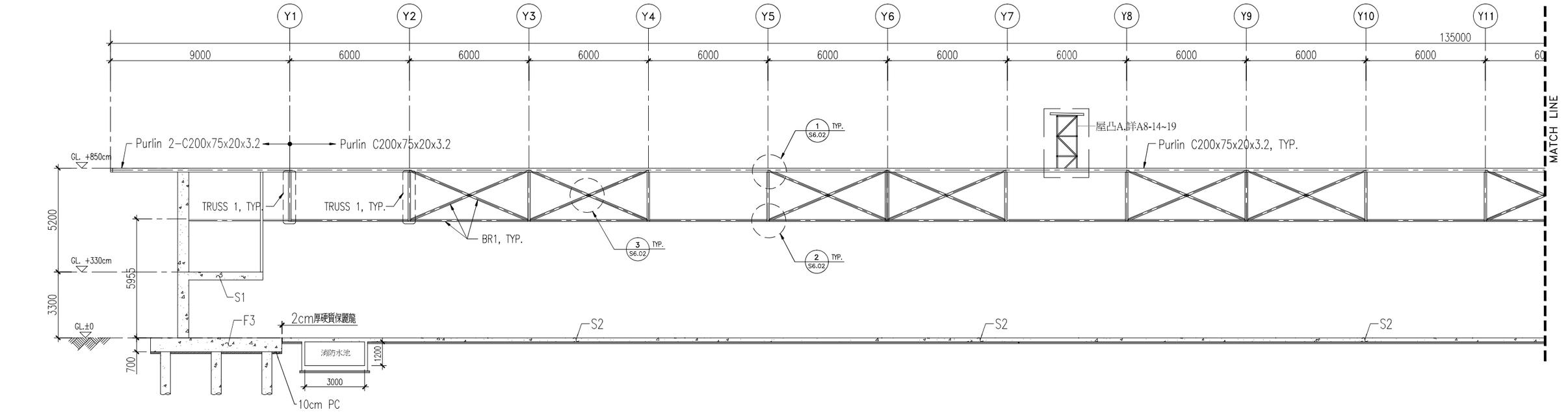
圖檔	10212-1
比例	A3:1/100
日期	
修正	

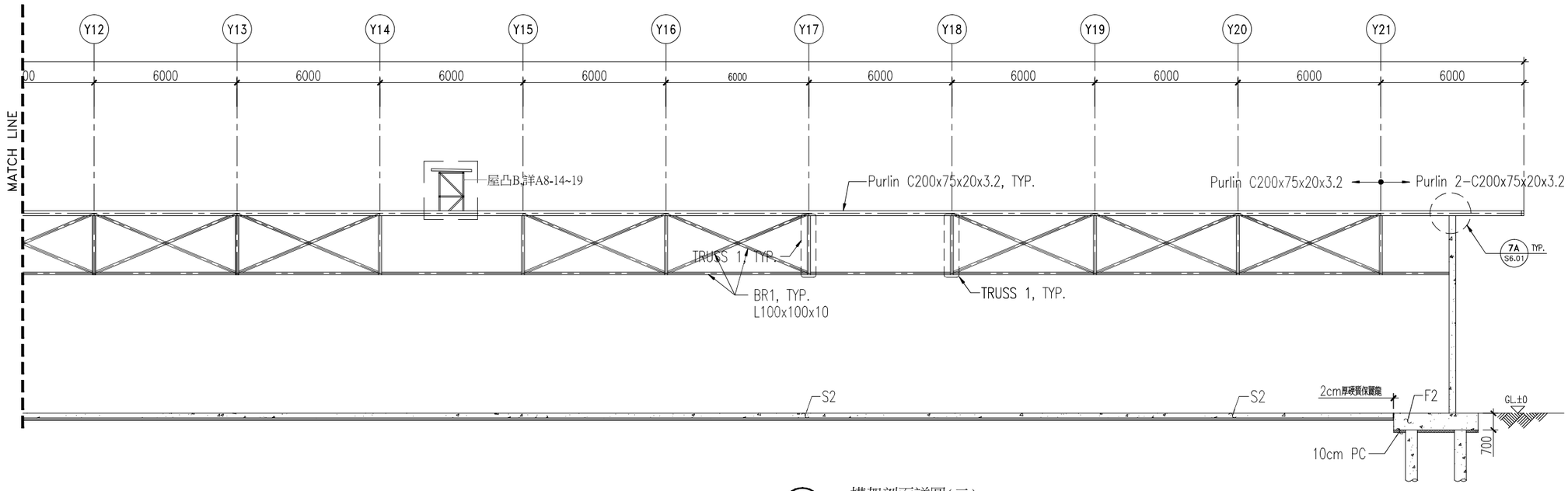
宜蘭縣倉儲式資源再生廠設置工程第一期工程
第一次變更設計

構架剖面詳圖(一)

圖號 S3-1

張號





1 S3.02 構架剖面詳圖(二)

S:1/100

田中央聯合建築師事務所 宜蘭市建業路428號 TEL 03-9253725 FAX 03-9253980 E-mail:fieldoffice@fieldoffice.com.tw	圖檔 10212-1 比例 A1:1/50 A3:1/100 日期 修正	宜蘭縣倉儲式資源再生廠設置工程第一期工程 第一次變更設計 構架剖面詳圖(二)	圖號 S3-2 張號

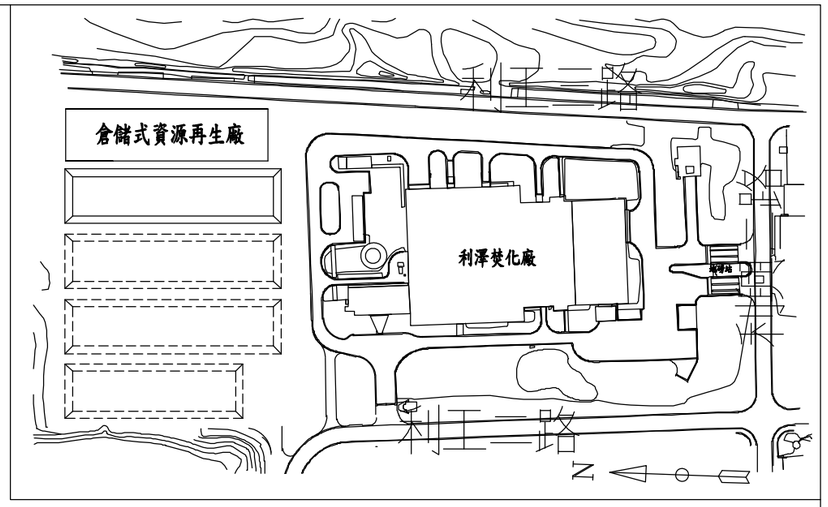
宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案竣工說明:

一、供應及安裝範圍:
1. 底渣進料及輸送系統。
2. 底渣前處理程序設備。
3. 空氣污染防制設備。
4. 安全防護設施。
5. 設備用電所需之電力設備系統。

二、設備處理量能:
1. 每年處理利澤焚化廠3萬3,000公噸底渣。
2. 設備運轉10個月/年(2個月排定歲修、維護及保養作業)。
3. 每月運轉22工作天，1天產能為150噸/天。
4. 1天運轉6小時，1小時產能為25噸/小時。
5. 產能係指焚化再生粒料產出量。

三、儲放區包括:
1. 底渣、鐵金屬、非鐵金屬、未燃物及焚化再生粒料貯存空間及標示牌，容量依建築物內部空間劃設，焚化再生粒料貯存空間以500公噸為1區。
2. 貯存空間阻隔設施，以環保、可重複使用組裝區隔，並以密閉式貯放設計。

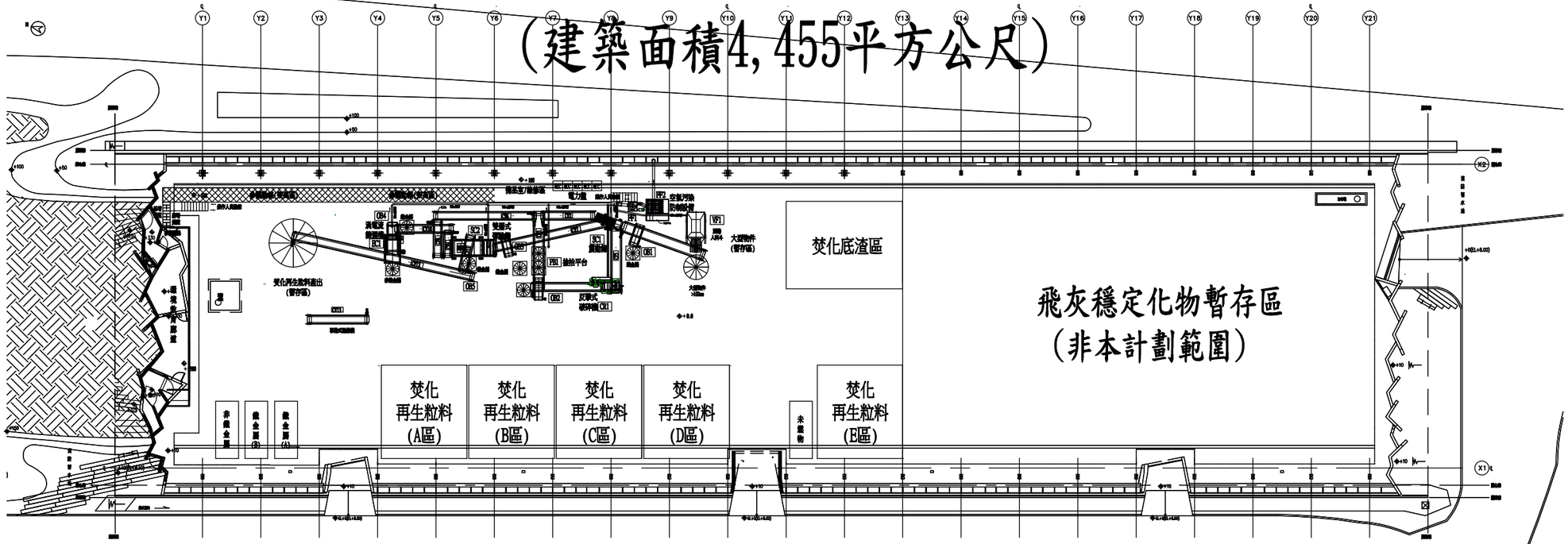
四、設置閉路電視錄影監視系統
1. 廠內車行路徑。
2. 處理設備入口、處理流程作業區及衍生廢棄物、焚化再生粒料出料口。
3. 底渣、衍生廢棄物及焚化再生粒料貯存區。
4. 設置符合[垃圾焚化廠焚化底渣再利用管理方式]規定。



倉儲式資源再生廠位置圖

使用執照:(108)(12)(20)建管使字第00703號
地址:宜蘭縣五結鄉成興村利工二路106-6號
地號:五結鄉利工段69地號等1筆
用途:廢棄物處理場

倉儲式資源再生廠
(建築面積4,455平方公尺)



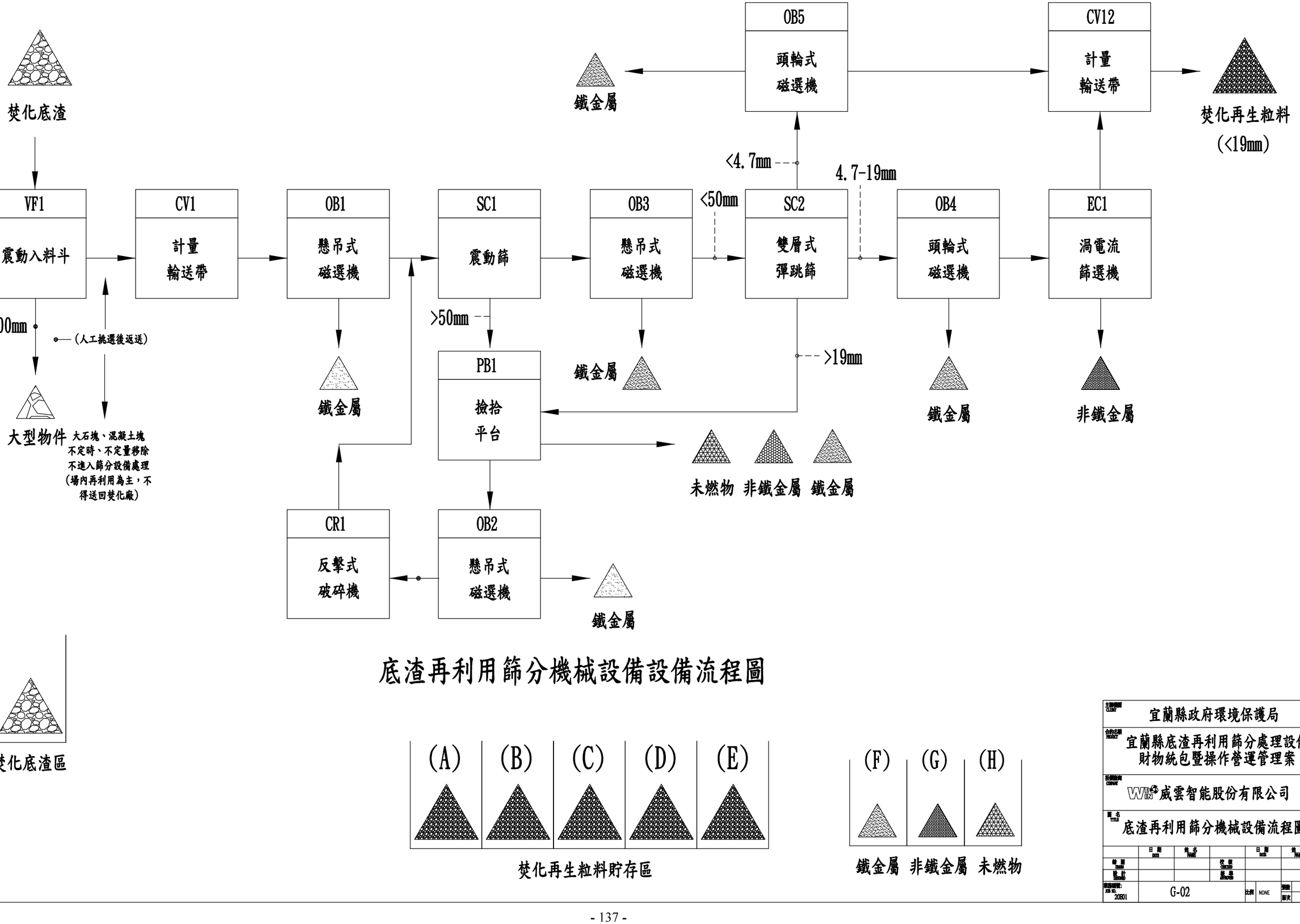
本計劃底渣篩分製程設備區
(2,940平方公尺)

主辦機關 CLIENT	宜蘭縣政府環境保護局
合約名稱 PROJECT	宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案
技術顧問 COMPANY	WEIN 威雲智能股份有限公司
圖名 TITLE	倉儲式再生資源廠配置圖

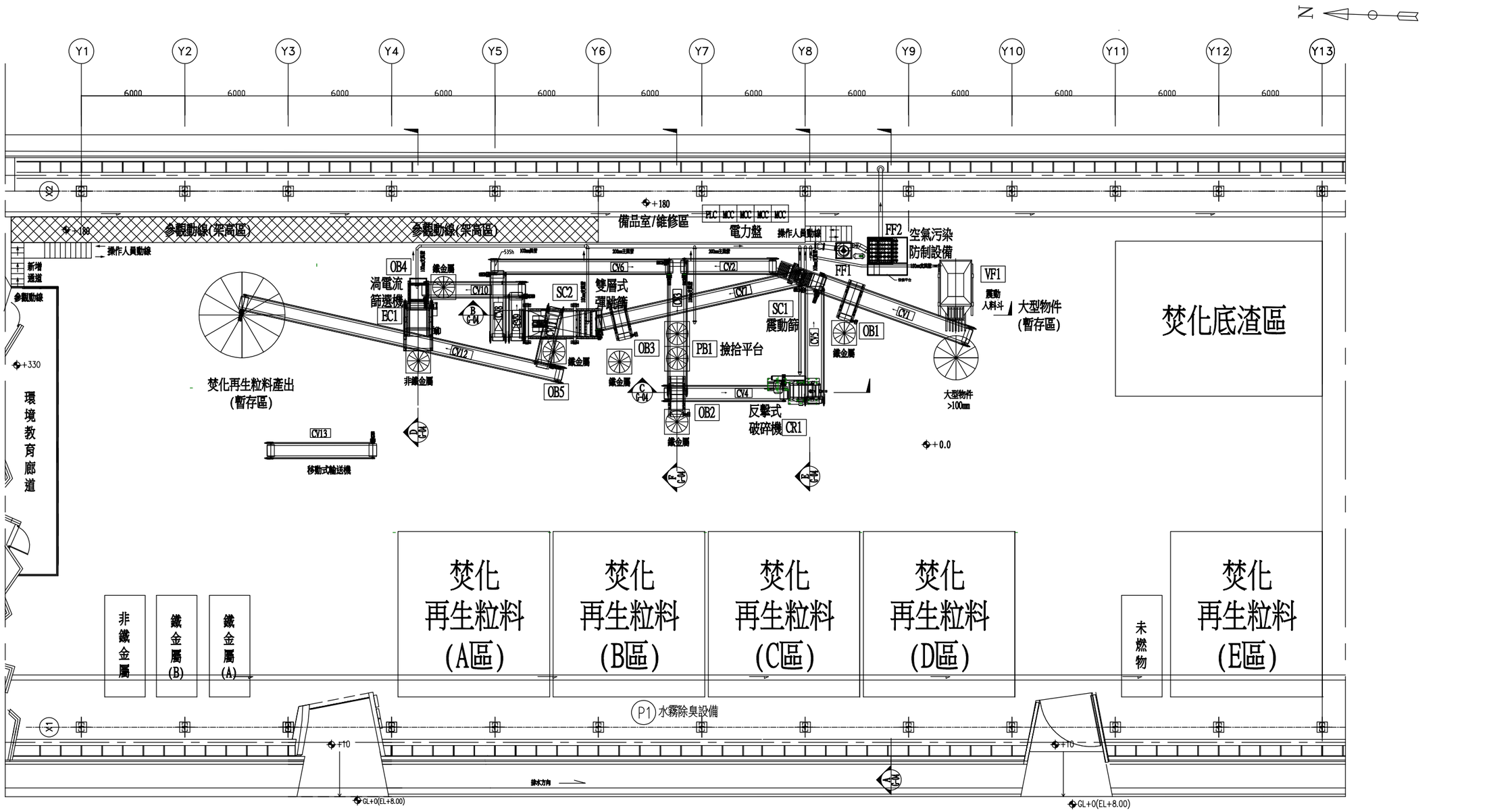
日期 DATE	姓名 NAME		日期 DATE	姓名 NAME
繪圖 DRAWN		校核 CHK.		
設計 DESIGN		展核 APPR.		

圖號 DWG. NO.	比例	版次 REV.
20B01 G-01	1:100	

底渣再利用篩分機械設備設備流程圖



主辦機關 CLIENT	宜蘭縣政府環境保護局
合約名稱 PROJECT	宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案
經辦廠商 OWNER	Win 威雲智能股份有限公司
圖名 TITLE	底渣再利用篩分機械設備流程圖
繪圖 DRAWN	日期 DATE / 姓名 NAME
設計 DESIGN	校核 CHECKED / 核准 APPROVED
案號編號 JOB NO.	20E01
圖號	G-02
比例	NONE
張數 / 版次	



底渣再利用篩分機械設備配置圖

編號	設備名稱	編號	設備名稱	編號	設備名稱
VF1	震動入料斗(含柵條)	CV5	破碎後返送輸送帶	CV11	<4.7mm再生粒料出料輸送帶
CV1	震動出料暨計量輸送帶	CV6	>19mm返送撿拾輸送帶	OB5	<4.7mm再生粒料磁選機
OB1	懸吊式磁選機	CV7	彈跳篩入料輸送帶	CV12	再生粒料出料暨計量輸送帶
SC1	50mm震動篩	OB3	懸吊式磁選機(入彈跳篩前)	CV13	移動式輸送機
CV2	>50mm出料輸送帶	SC2	雙層彈跳篩(4.7、19mm)	FF1	旋風集塵器(含誘引風機)
CV3	撿拾平台輸送帶	CV8	>19mm出料輸送帶	FF2	袋式集塵器
PB1	撿拾平台	CV9	4.7-19mm出料輸送帶	P1	水霧除臭設備
OB2	撿拾平台磁選機	CV10	渦電流入料輸送帶		
CR1	反擊式破碎機	OB4	渦電流前強力磁選機		
CV4	破碎機入料輸送帶	EC1	渦電流篩選機		

REV.	DATE	BY	DGN.	CHK.

業主單位 CLIENT：宜蘭縣政府環境保護局

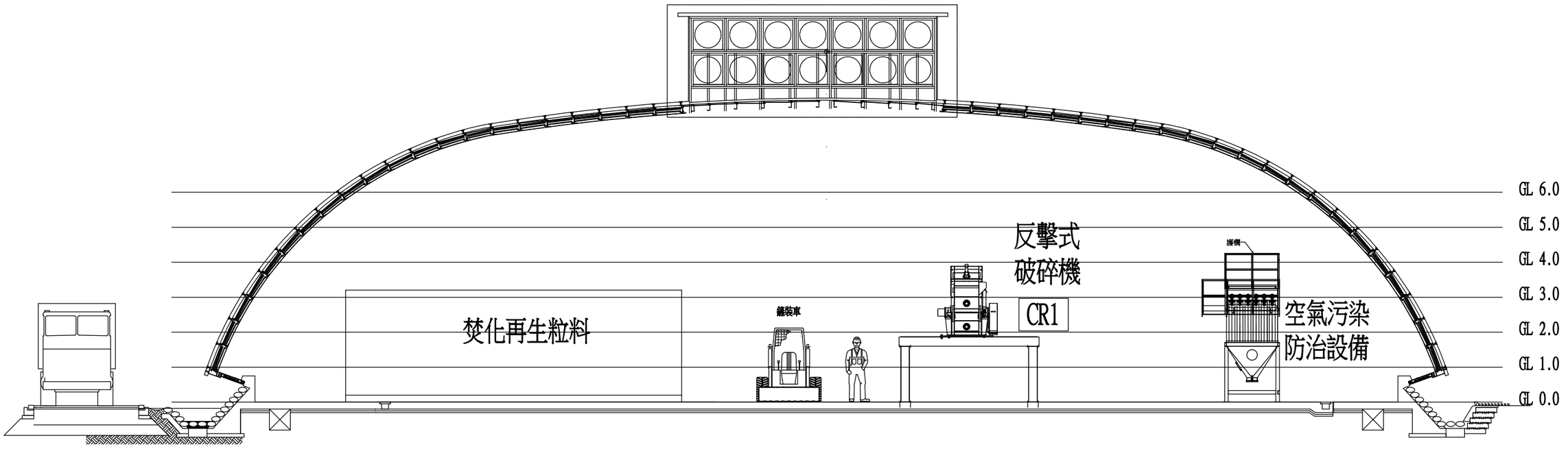
合約名稱 PROJECT：宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案

技術顧問 COMPANY：威雲智能股份有限公司

圖名 TITLE：機械設備設備配置圖

繪圖 DRAWN	109.05.25	審核 CHECKED		109.05.25	核定 APPROVED
設計 DESIGN	109.05.25	開始日 START	竣工日 FINISH	109.05.25	開始日 START

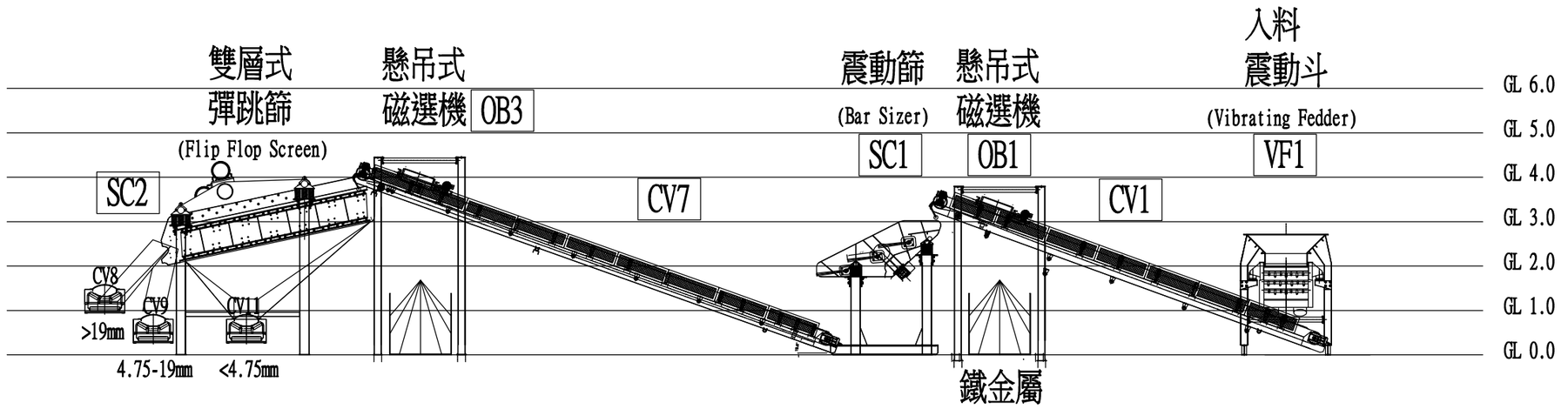
契約編號 CONTRACT NO.	圖號 DWG. NO.	比例 SCALE	張數 SHEET	版次 REV.
20B01	G-03	1:100	1	1



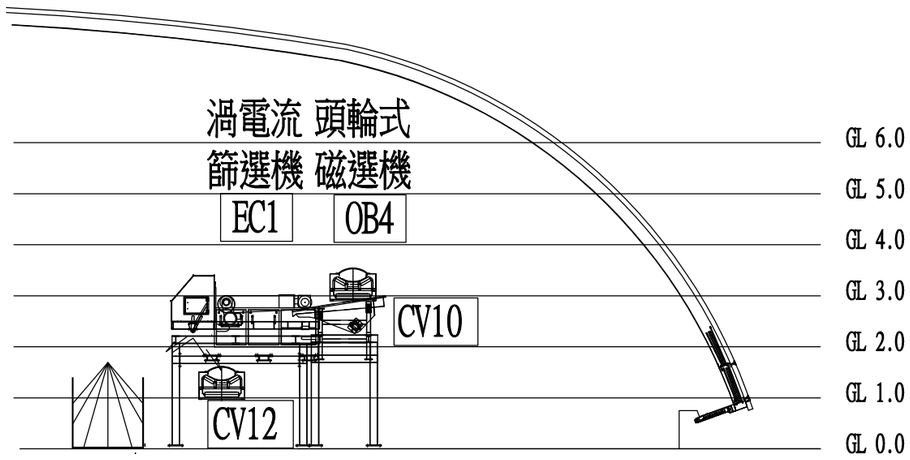
A-A剖面

REV.	DATE	BY	DGN.	CHK.	DESCRIPTION

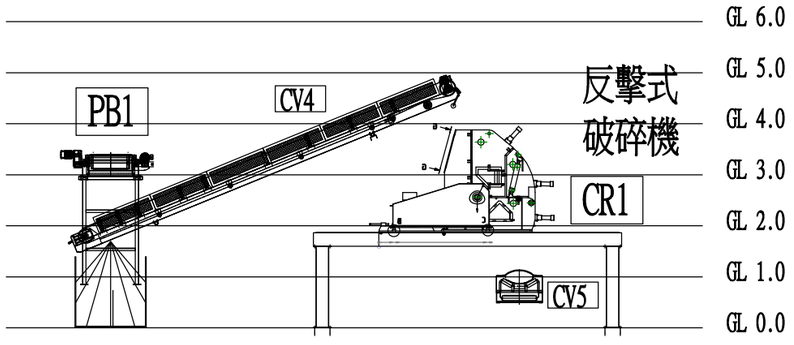
主辦機關 CLIENT	宜蘭縣政府環境保護局				
合約名稱 PROJECT	宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案				
設計廠商 COMPANY	WIN威雲智能股份有限公司				
圖名 TITLE	機械設備剖面圖(一)				
	日期 DATE	姓名 NAME		日期 DATE	姓名 NAME
繪圖 DRAWN	109.05.25	謝佳凱	校對 CHECKED	109.05.25	謝佳凱
設計 DESIGNED	109.05.25	簡瑞良	核准 APPROVED	109.05.25	簡瑞良
契約圖號 NO.	20B01	G-04-01	比例	1:100	張數 1 / 版次 1



B-B剖面



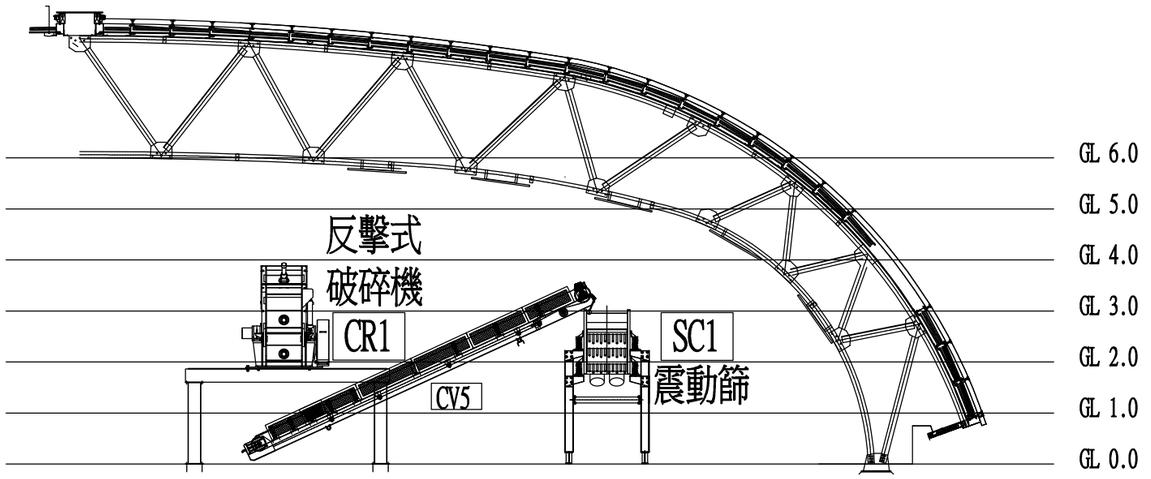
D-D剖面



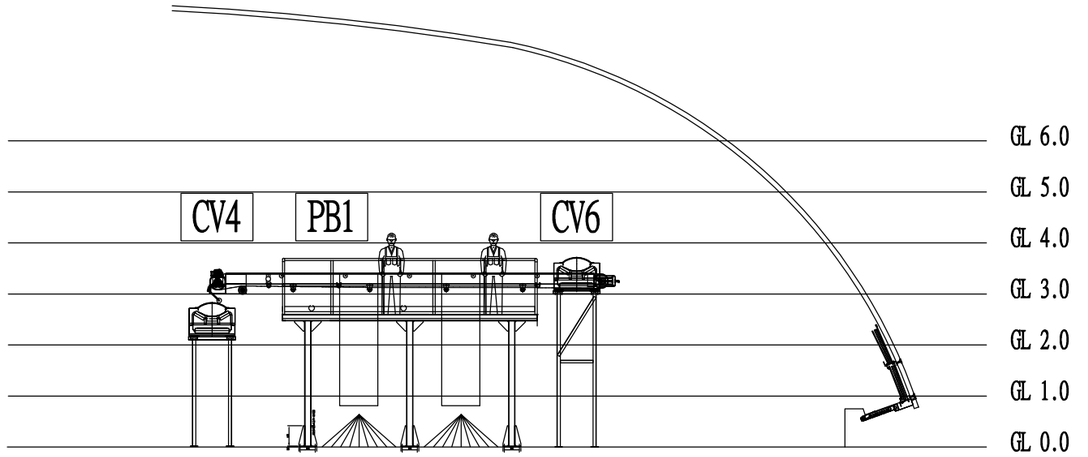
C-C剖面

REV.	DATE	BY	DGN.	CHK.	DESCRIPTION

主辦機關 CLIENT	宜蘭縣政府環境保護局				
合約名稱 PROJECT	宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案				
執行廠商 COMPANY	WIN 威雲智能股份有限公司				
圖名 TITLE	機械設備剖面圖(二)				
	日期 DATE	姓名 NAME		日期 DATE	姓名 NAME
繪圖 DRAWN	109.05.25	蕭佳鎮	校核 CHECKED	109.05.25	蕭佳鎮
設計 DESIGNED	109.05.25	蕭佳鎮	核准 APPROVED	109.05.25	蕭佳鎮
契約編號: 2DB01	G-04-02		比例	1:100	張數 1 / 頁次 1



E-E剖面



F-F剖面

REV.	DATE	BY	DCN.	CHK.	DESCRIPTION

主辦機關 CLIENT：宜蘭縣政府環境保護局

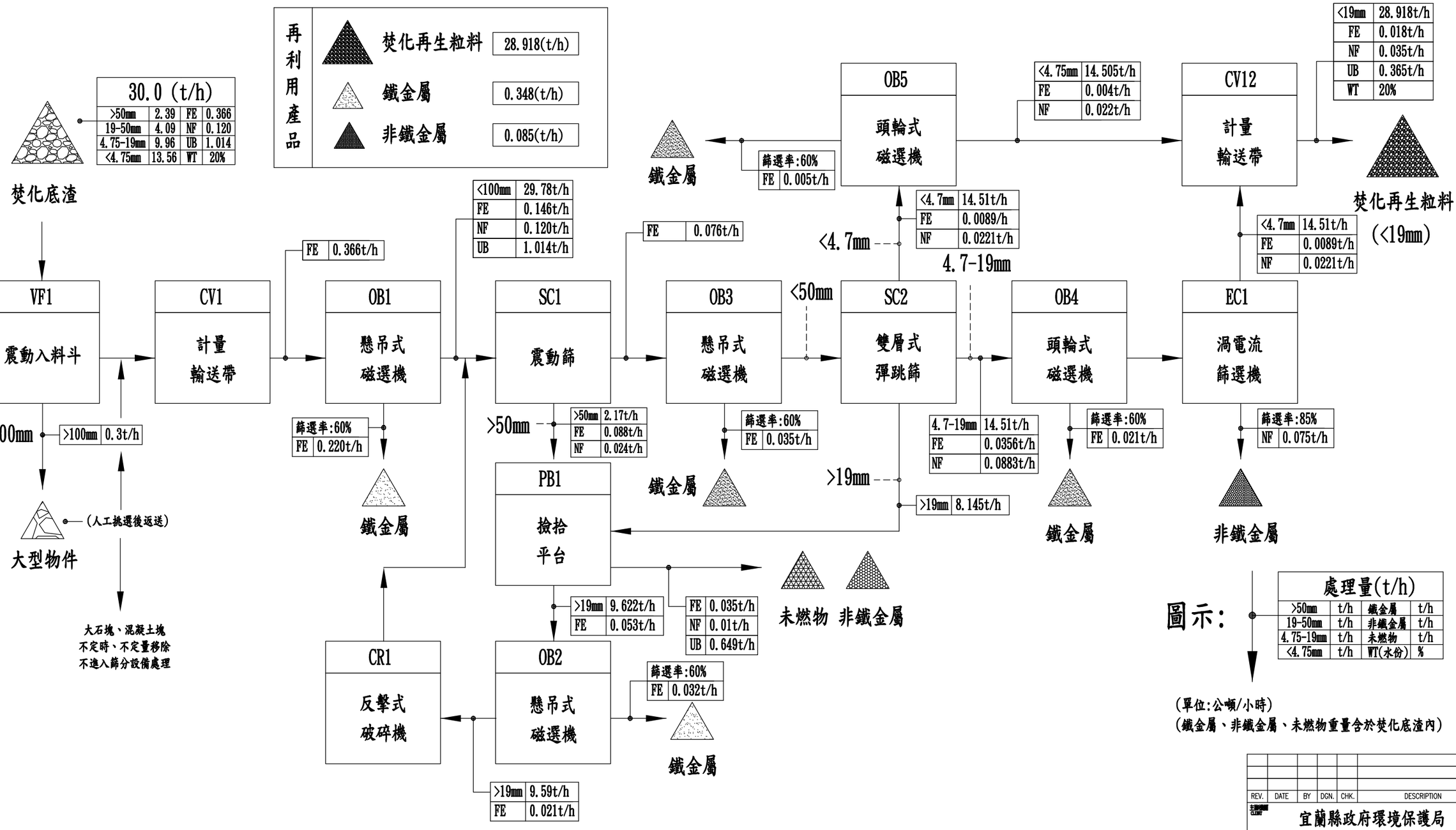
合約名稱 PROJECT：宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案

設計廠商 CONSULT：威雲智能股份有限公司

圖名 TITLE：機械設備剖面圖(三)

	日期 DATE	姓名 NAME		日期 DATE	姓名 NAME
繪圖 Drawn	109.05.25	簡佳鎮	校核 Checked	109.05.25	簡佳鎮
設計 Designed	109.05.25	簡瑞良	核准 Approved	109.05.25	簡瑞良

契約編號 NO.	圖號	比例	張數	版次
20E01	G-04-03	1:100	1	1



質量平衡圖(30 T/h)

說明:

1. 設計採用焚化再生粒料、鐵金屬、非鐵金屬及未燃物之比例為108年利澤焚化廠焚化底渣執行篩分處理結果。
2. 鐵金屬、非鐵金屬及大型物件因利澤焚化廠貯坑設有前磁選處理程序，故相對比例較低。
3. 焚化再生粒料含水率會因貯存時間而改變造成質量平衡落差。
4. 本質量平衡結果會隨焚化底渣性質改變而變動，本公司依契約以焚化再生粒料產出量驗收。
5. 各單元質量平衡數據為推估值，因焚化底渣受垃圾性質影響極大。

處理量	設計參數	焚化底渣	焚化再生粒料	鐵金屬	非鐵金屬	未燃物
每小時	-	30.0	28.918	0.348	0.085	0.649
每日	六小時	180	173.5	2.09	0.51	3.89
每月	22天	3,960	3,817.2	45.98	11.22	85.58
每年	十個月	39,600	38,172	459.8	112.2	855.8
百分比	-	100%	96.4%	1.16%	0.28%	2.16%

(單位為公噸，焚化底渣含水率為20%，焚化再生粒料含水率為20%)

REV.	DATE	BY	DGN.	CHK.	DESCRIPTION

主辦機關 CLIENT: 宜蘭縣政府環境保護局

合約名稱 PROJECT: 宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案

顧問公司 COMPANY: 威雲智能股份有限公司

圖名 TITLE: 質量平衡圖

	日期 DATE	姓名 NAME		日期 DATE	姓名 NAME
繪圖 DRAWN			校核 CHECKED		
設計 DESIGNED			審查 APPROVED		

承攬廠商 JOB NO. 20B01 | G-05 | 比例 NONE | 張數 | 版次

主要設備	規格及性能	數量
震動入料斗(VF1) Vibrating Screen	1. 底渣篩分進料處，承接口尺寸為 1.7x2.5M，大於鏟裝機及怪手入料需求，可確保進料時不發生溢漏情形。 2. 設計最大處理量為 50 噸/小時。 3. 設計柵距為 100mm，攔除大型物件。 4. 設有三層式篩網能維持連續且均勻入料。 5. 雙震動馬達，最高頻率為 1,200rpm。 6. 採用不須潤滑式震動馬達。 7. 耗電量 5KW*2 組。 8. 材質 ：Carbon steel A-42B。 9. 塗裝 ：Sand blasting Sa 2 1/2 Epoxy-Polyurethane 120 microns	一組
震動篩 (SC1) Bar Sizer	1. 設計最大處理量為 50 噸/小時。 2. 設計柵距設計為 47-52mm。 3. 採三層式設計，底渣 3D 均勻翻滾。 4. 雙震動馬達，最高頻率為 1,200rpm。 5. 採用不須潤滑式震動馬達。 6. 耗電量 1.08KW*2 組。 7. 材質 ：Carbon steel A-42B 8. 塗裝 ：Sand blasting Sa 2 1/2 Epoxy-Polyurethane 120 microns	一組
彈跳篩 (SC2) Flip Flop Screen	1. 設計最大處理量為 50 噸/小時。 2. 設計篩網面積 6.45 平方公尺。 3. 篩網設計為 4.7mm 及 19mm。 4. 篩網材質 PP。 5. 採具自清式篩網，避免阻塞。 6. 雙震動馬達，最高頻率為 900rpm。 7. 採用不須潤滑式震動馬達。 8. 耗電量 7.5KW*2 組。 9. 材質 ：Carbon steel A-42B 10. 塗裝 ：Sand blasting Sa 2 1/2, Epoxy Polyurethane 120 microns	一組
反擊式 破碎機 (CR1) Impact Crusher	1. 設計處理量為 30 噸/小時。 2. 投入口 620x800mm。 3. 破碎能力 19mm 以下(效率 80%以上)。 4. 衝擊板設計為可拆換式。 5. 不設篩網避免阻塞。 6. 馬達容量 75KW。 7. 搭配變頻器變速操作。	一組

主要設備	規格及性能	數量
磁選機 (OB1、OB2、OB3、OB4、OB5)	1. OB1、OB2、OB3 採用懸吊式，OB4、OB5 採用頭輪式。 2. 磁力 4,000 高斯。 3. 配合皮帶寬度 600、800mm。 4. OB1、OB2、OB3 耗電量 2.2KW。 5. 處理能力 30 噸/小時以上。	五組
渦電流篩選機 (EC1)	1. 皮帶輸送機 2.2KW。 2. 渦輪 5.5KW。 3. 震動入料 0.37KW*2 組。 4. 輸送帶寬 1,224mm，長度 4,060mm，厚度 3.2mm。 5. 輸送帶速度可調整(0-60M/min)。	一組
撿拾平台	1. 輸送帶寬 800mm。 2. 輸送機速度可調整。 3. 設急停開關，連鎖輸送系統。	一組
輸送帶系統 (CV1-CV13)	1. 輸送帶寬 600mm、800mm 兩種。 2. 輸送機速度可調整(設計為 60M/min)。 3. 設急停開關，連鎖輸送系統。 4. 外露運動部分設護罩。 5. 現場停止及開關控制盤。 6. 下料銜接段採密閉覆蓋避免揚塵。	十三組 (含移動式一組)
計量秤重	1. 輸送帶秤重系統是由積算器、秤重元 Load Cell 及速度感應器三種設備所組合而成。 2. 積算器型號為 BW500/L，訂製 code 為 7MH7152。 3. 秤重元 Load Cell 型號為 MCS，訂製 code 為 7MH7125。 4. 速度感應器型號為 RBSS，訂製 code 為 7MH7134。	二組
粉塵收集處理 (FF1+FF2)	1. 包括旋風式集塵器及袋式集塵器。 2. 風量：50CMM，靜壓：200mmAq 3. 收集管線與控制風門。 4. 誘引風車 5Hp*380V*60Hz。 5. 粉塵去除率高於 96%。	一式

REV.	DATE	BY	DGN.	CHK.	DESCRIPTION

業主名稱 CLIENT：宜蘭縣政府環境保護局

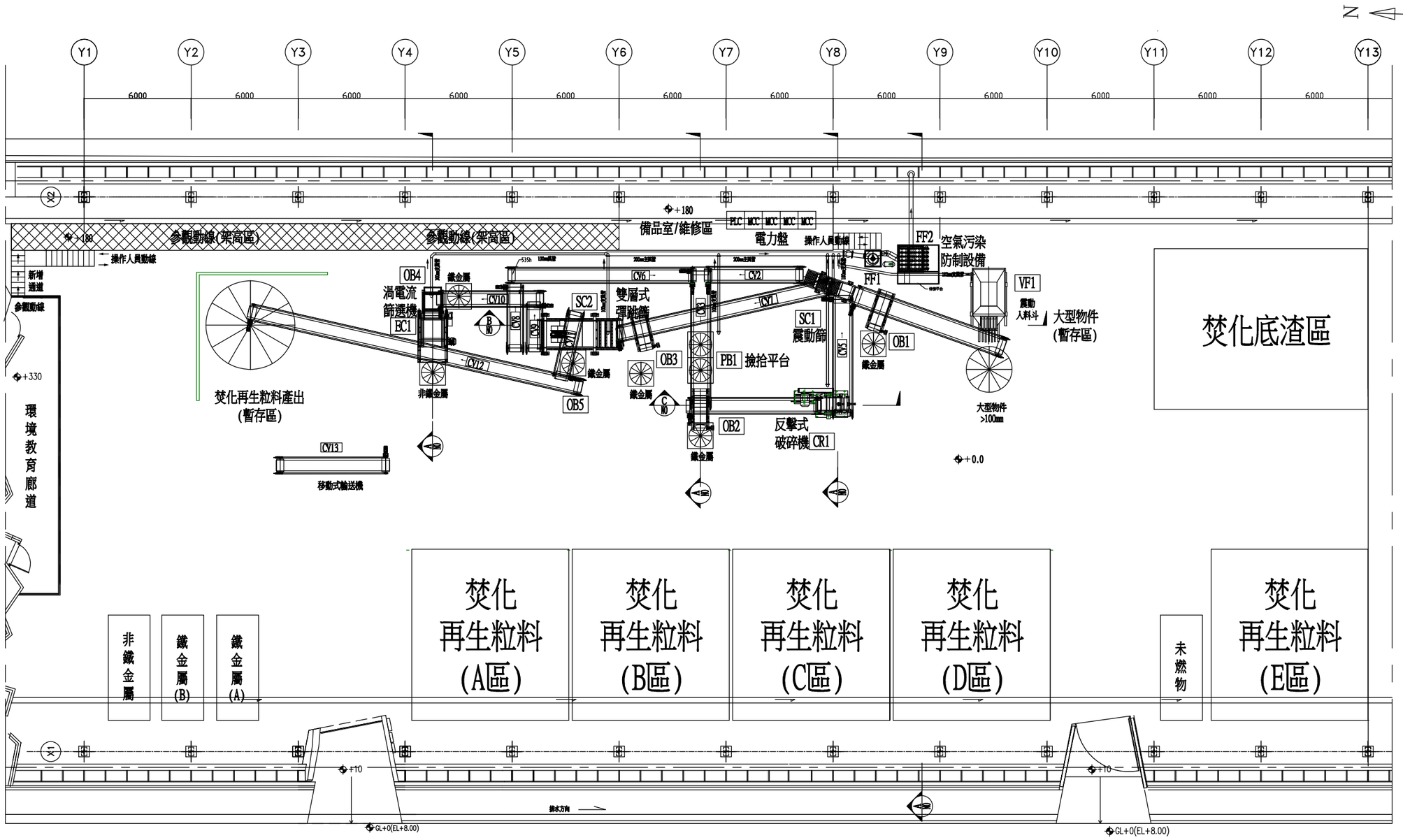
合約名稱 PROJECT：宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案

設計廠商 COMPANY：威雲智能股份有限公司

圖名 TITLE：設備規格表

繪圖 DRAWN	109.05.25	審核 CHECKED		日期 DATE	109.05.25	核定 APPROVED
設計 DESIGN	109.05.25	製圖 DRAWN		日期 DATE	109.05.25	製圖 DRAWN

圖號 DWG. NO.：20B01 G-06　比例 SCALE：1:100　張次 SHEET：1　版次 REV.：1



底渣、鐵金屬、非鐵金屬、未燃物、焚化再生粒料之貯存位置圖

配置分區	設計基準	需求貯存量	設計面積	可貯存量
1.焚化底渣區	7天	633噸	120平方公尺	676噸
2.焚化再生粒料(A-D區)	20天	1,627噸	338平方公尺	2,024噸
3.焚化再生粒料(E區)	45天	407噸	84.5平方公尺	506噸
4.鐵金屬貯存區	30天	63噸	13.8平方公尺	83噸
5.非鐵金屬貯存區	30天	15噸	13.8平方公尺	33噸
6.未燃物貯存區	3天	12噸	13.8平方公尺	17噸

說明:本表需求貯存量是以每年再生粒料產量33,000公噸計算。

REV.	DATE	BY	DGN.	CHK.	DESCRIPTION

主辦機關 CLIENT: 宜蘭縣政府環境保護局

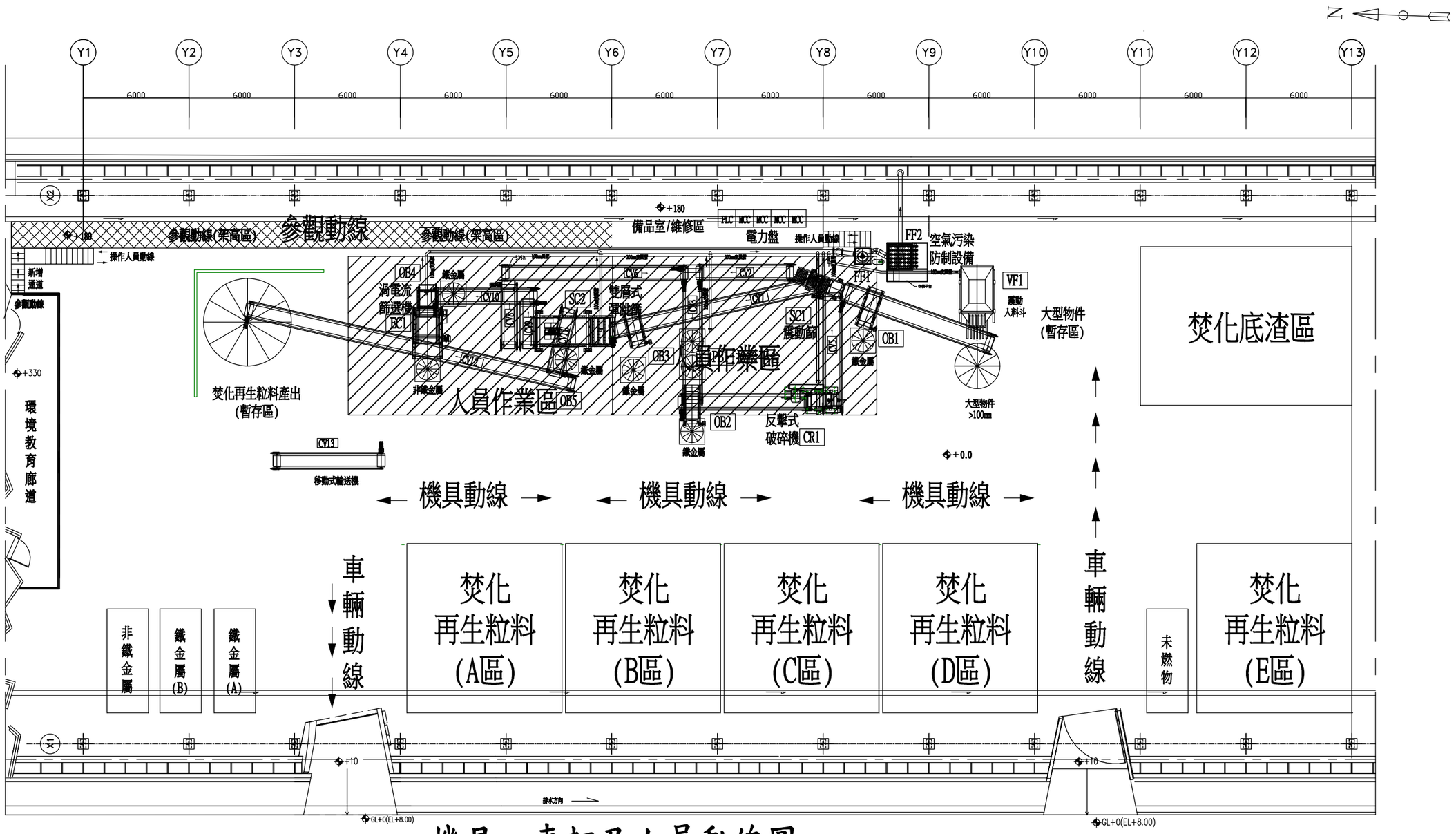
合約名稱 PROJECT: 宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案

系統廠商 COMPANY: WIN 威雲智能股份有限公司

圖名 TITLE: 底渣、鐵金屬、非鐵金屬、未燃物、焚化再生粒料之貯存位置圖

	日期 DATE	姓名 NAME		日期 DATE	姓名 NAME
繪圖 DRAWN	109.05.04	簡佳鎮	校核 CHECKED	109.05.05	簡佳鎮
設計 DESIGNED	109.05.04	簡佳鎮	審查 APPROVED	109.05.05	簡佳鎮

圖號 DRAWING NO.: 20B01 G-07 比例 SCALE 1:100 張數 SHEET 1 版次 REV 1

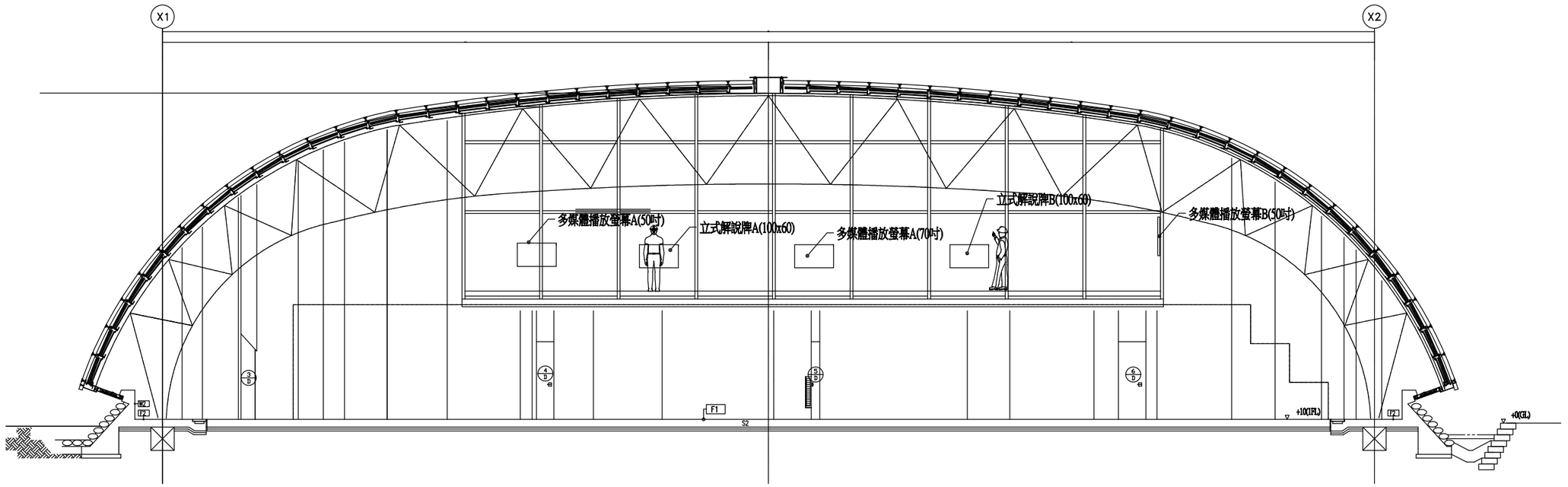


機具、車輛及人員動線圖

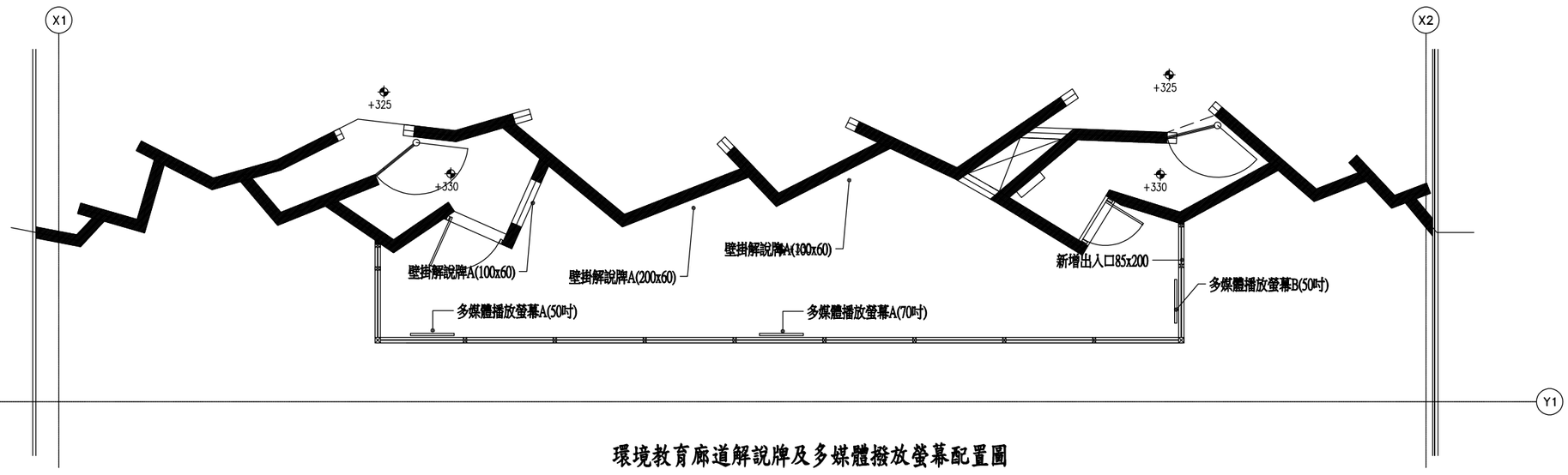
編號	設備名稱	編號	設備名稱	編號	設備名稱
VF1	震動入料斗(含柵條)	CV5	返送破碎輸送帶	CV11	<4.7mm再生粒料出料輸送帶
CV1	震動出料暨計量輸送帶	CV6	破碎後返送輸送帶	OB5	<4.7mm再生粒料磁選機
OB1	懸吊式磁選機	CV7	彈跳篩入料輸送帶	CV12	再生粒料出料暨計量輸送帶
SC1	50mm震動篩	OB3	懸吊式磁選機(入彈跳篩前)	CV13	移動式輸送機
CV2	>50mm出料輸送帶	SC2	雙層彈跳篩(4.7、19mm)	FF1	旋風集塵器(含誘引風機)
CV3	撿拾平台輸送帶	CV8	>19mm出料輸送帶	FF2	袋式集塵器
PB1	撿拾平台	CV9	4.7-19mm出料輸送帶	P1	水霧除臭設備
OB2	撿拾平台磁選機(破碎前)	CV10	渦電流入料輸送帶		
CR1	反擊式破碎機	OB4	渦電流前強力磁選機		
CV4	破碎機入料輸送帶	EC1	渦電流篩選機		

REV.	DATE	BY	DGN.	CHK.	DESCRIPTION

主辦機關 CLIENT	宜蘭縣政府環境保護局				
合約名稱 PROJECT	宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案				
技術顧問 COMPANY	WIN 威雲智能股份有限公司				
圖名 TITLE	機具、車輛及人員動線圖				
設計 DESIGN	109.05.25	繪圖 DRAWN		109.05.25	審查 CHECKED
製圖 DRAWN	109.05.25	審查 CHECKED		109.05.25	核定 APPROVED
契約編號 CONTRACT NO.	20B01	圖號 DWG. NO.	G-08	比例 SCALE	1:100
				張數 SHEET	1
				版次 REV.	1



環境教育廊道解說牌及多媒體撥放螢幕立面圖



環境教育廊道解說牌及多媒體撥放螢幕配置圖

REV.	DATE	BY	DGN.	CHK.	DESCRIPTION

主辦機關 CLIENT
宜蘭縣政府環境保護局

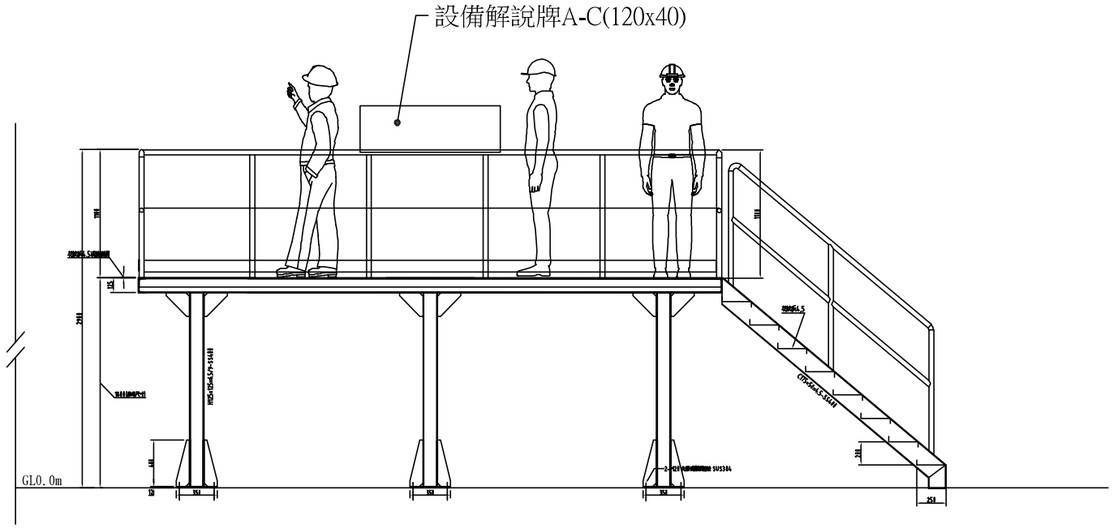
合約名稱 PROJECT
宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案

設計廠商 COMPANY
威雲智能股份有限公司

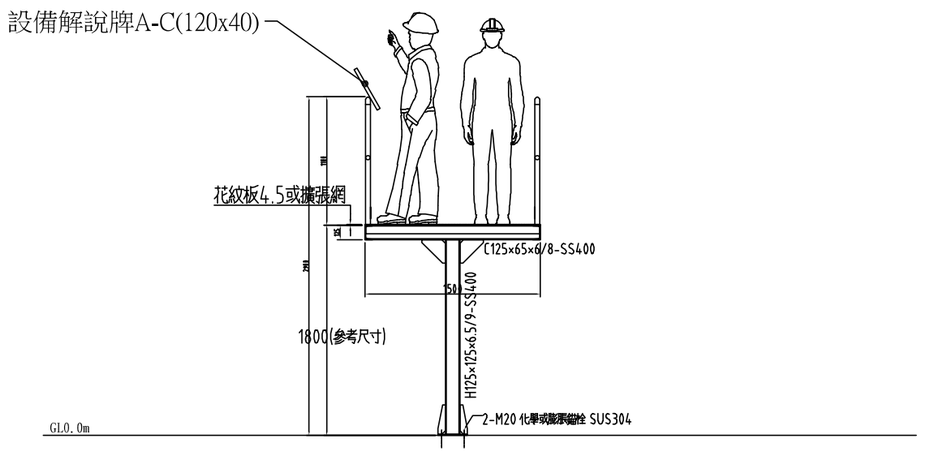
圖名 TITLE
環境教育廊道配置圖

	日期 DATE	姓名 NAME		日期 DATE	姓名 NAME
繪圖 DRAWN			校核 CHECKED		
設計 DESIGN			審查 APPROVED		

契約編號 CONTRACT NO.	圖號 DWG. NO.	比例 SCALE	張數 SHEET
20B01	G-09	1:100	順次 NO.



參觀走道設備流程解說立面圖



參觀走道設備解說牌剖面圖

REV.	DATE	BY	DGN	CHK	DESCRIPTION

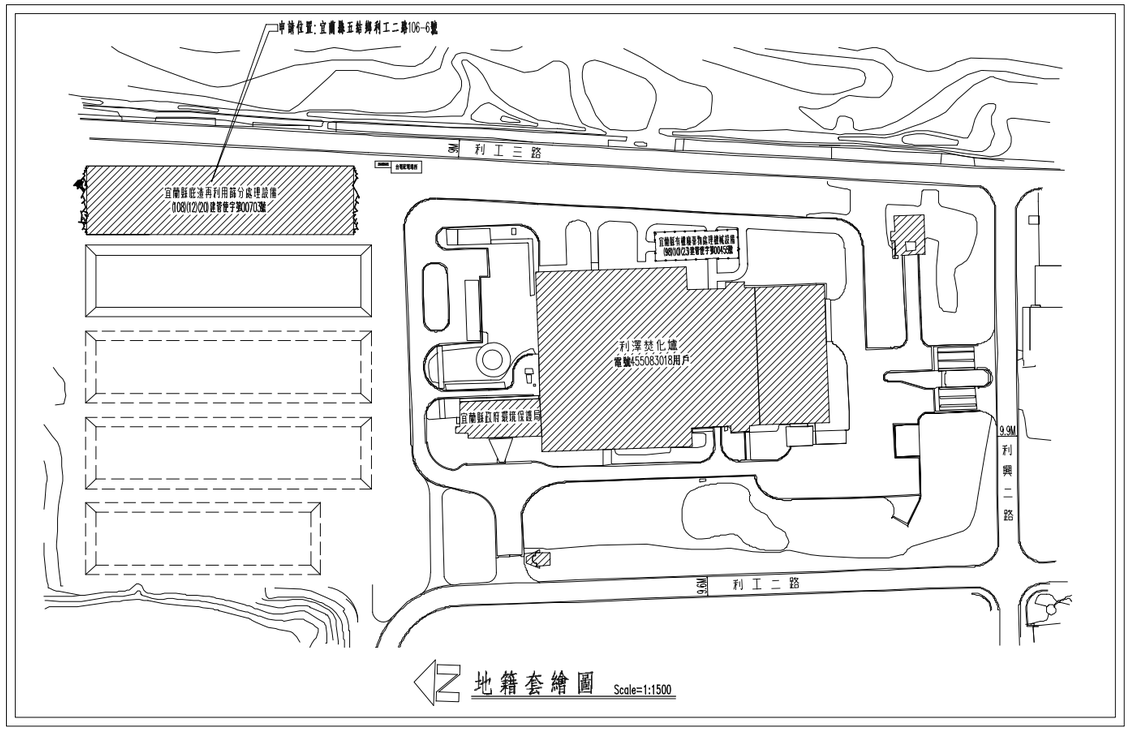
主辦機關 CLIENT	宜蘭縣政府環境保護局				
合約名稱 PROJECT	宜蘭縣底渣再利用篩分處理設備 財物統包暨操作營運管理案				
設標廠商 COMPANY	威雲智能股份有限公司				
圖名 TITLE	參觀走道設備解說牌圖				

	日期 DATE	姓名 NAME		日期 DATE	姓名 NAME
繪圖 DRAWN	109.7.17	蘿佳凱	校核 CHECKED	109.7.17	蘿佳凱
設計 DESIGNED	109.7.17	劉建良	核准 APPROVED	109.7.17	劉建良
G-10			比例	1:100	

圖例說明	
⊠	室外型集中電錶箱須合乎台電規格採不銹鋼材質附防水型箱體.
◢	開關箱2.3mm厚鐵板製成外烤漆內裝NFB裝高頂邊離地180cm.(規格另說明除外)
⧓	動力開關箱2.3mm厚鐵板製成外烤漆內裝NFB裝高頂邊離地180cm.(規格另說明除外)
⊠	動力開關箱2.3mm厚鐵板製成外烤漆內裝NFB裝高頂邊離地180cm.(規格另說明除外)
Ⓙ	20Wx2,LED (4呎)工事燈具(LED燈管保證2年),裝高配合現場.
Ⓨ	20Wx1,LED (4呎)工事燈具(LED燈管保證2年),裝高配合現場.
Ⓤ	20W,LED (2呎)工字燈具(附感應全亮&微亮功能) LED模組保證2年,裝高配合現場.
⊠	10Wx4,LED (2呎)崁燈燈具LED模組保證2年,裝高配合現場.
ⓩ	100W,LED投射燈燈具LED模組保證2年,裝高配合現場.
Ⓐ	100W投射無極燈燈具,保證2年,裝高配合現場.
○	電燈電源出口含出線盒,接角燈頭及LED燈等.
⊛	電風扇電源出口含出線盒,電風扇是既有器具.
ⓓ	飲水機電源出線口位置 連出線匣裝於離地配合現場.
Ⓙ	小便斗及其它器具電源出線口位置附單連插座,連出線匣裝於離地配合現場.
Ⓜ	馬達出線口位置,連出線匣裝於離地配合現場.
⊛	電極水位控制感應棒不鏽鋼製品,連出線匣裝於離地配合現場.
Ⓟ	五合一浴室暖風換氣乾燥機或換氣機連PVC蓋板,出線匣裝於離地配合現場.
⊖	冷氣機專用插座2P-250V-20A連PVC蓋板及出線匣配合現場.
⊖	除濕機專用插座2P-250V-20A連PVC蓋板及出線匣配合現場.
⊖	洗衣機專用插座2P-250V-20A連PVC蓋板及出線匣配合現場.
⊖	廚房專用插座2P-250V-20A連PVC蓋板及出線匣裝高90cm.
⊖	單連暗插座2P-125V-15A連PVC蓋板出線匣裝於離地配合現場.
⊖	雙連暗插座2P-125V-15A連PVC蓋板及出線匣裝高配合現場.
⊖	接地型雙連暗插座2P-250V-15A連PVC紅色蓋板"220V"裝高30cm
S	單連暗開關1P-150V-10A連PVC蓋板及出線匣裝高120cm.
◉M1	二線式開關組SW1切大面板遙控開關附鋁蓋板組±24V 6mA及出線匣裝高120cm.
◉M2	二線式開關組SW2切大面板遙控開關附鋁蓋板組±24V 7mA及出線匣裝高120cm.
◉M3	二線式開關組SW3切大面板遙控開關附鋁蓋板組±24V 8mA及出線匣裝高120cm.
◉M4	二線式開關組SW4切大面板遙控開關附鋁蓋板組±24V 9mA及出線匣裝高120cm.
◉MR	3.5吋液晶觸控開關附專用蓋板及出線匣裝高120cm.
E	接地測試端子箱(規格尺寸依詳大樣圖說)
⊙ •	3/4"x10'長銅心接地銅棒.
▭	攝影機出口含腳架.(沿用既有,更新另案處理)
▽	半球型攝影機出口.(沿用既有,更新另案處理)
◎	廣播喇叭L級吸頂式5W
———	導線管設於平頂或牆內,配合現場.
– – –	地板壓條(插座,資訊,電話)導線設於地坪位置配合現場.
———	訊號管設於平頂或牆內,配合現場.
—TC—	電話,資訊PVC導線管於地坪或牆內配Cat 6-UTP資訊纜線含隔離裝置穿EMT
·-·-·-·-	火警管設於平頂或牆內配合現場.
—S—	緊急廣播管設於平頂或牆內配合現場.

註:(1)導線管除註明外均為2根2.0m/m PVC電線穿於18mm PVC管中較大較多者如□表示2根5.5m/m PVC電線穿於22mm PVC管中,其餘管線線徑另註明累推.
(2)本工程配管配線均依經濟部頒用戶用電設備裝置規則施工並確實接地,接地電阻<50Ω,接地桿責任施工.
(3)導線管如有以明管配置,依建築技術規則須採不燃材料製成或使用具有同等效能之防火措施(防火油漆被覆施理).其貫通防火區劃時,貫穿部位與防火區劃合成之構造應具有二小時以上之防火時效.
(4)高層建築物之導線管路含接地線管路均以明管配置或管道間配置全部採金屬管材,如EMT管註明為E-63(2")、E-31(1")、E-25(3/4")其餘累推,或GIP-"S"管註明為GIP-82(3")等.
(5)應加裝漏電斷路器之場所.請依經濟部頒用戶用電設備裝置規則第一章第十一節辦理.
(6)導線管路埋入RC內採用CD管須符合經濟部標準局CNS12152類號C4448及正字標誌之依據.
(7)本工程設戶標準應參考「台電營業規章」之相關規定辦理.
(8)施工時,所有幹管線徑大小,迴路數,以單線圖上所示為施工標準.本工程圖說與標單乏為施工之依據如不明確以設計師或業主說明為施工之依據.
(9)本工程電氣圖面由電機技師簽證負責.
(10)本案依「用戶用電設備裝置規則」、「電業供電線路裝置規則」、「台電營業規章」之相關規定辦理.

目錄	
E-01	電氣增設-圖例說明、受電箱電錶箱接線圖、電力負載表、地籍套繪圖
E-02	電氣增設-開關箱接線圖、開關箱盤體外觀呎吋詳圖、接地測試端子箱、接地系統詳圖
E-03	電氣增設-幹線一層平面圖(右)
E-04	電氣增設-幹線、接地一層平面圖(左)
E-05	電氣增設-配電一層平面圖(左)



地籍套繪圖 Scale=1:1500

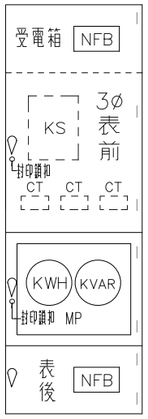
工程名稱:宜蘭環保局-底渣再利用篩分處理設備-電氣增設　　分電盤負載表及接線圖　　第1頁,共1頁

盤名:MP PANEL　　往上連接盤名:KWH #*MP*

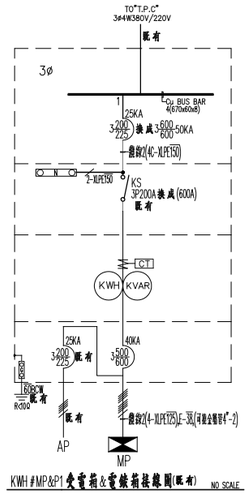
回路編號	說明	連接 合計	A	B	C	斷路器 P-AF-AT	I.C.(KA)	電流I(A)	長度(M)	功因(PF)	線徑(線別、線條、地線)	管徑(mmΦ)	壓降(%)	結線圖 3Ø4W 380V/220V
1	入料計量動態秤重(WT1) 1HPx1	1332	1332			2-100-20	20	6.1	27	0.82	PVC纜線(3c-2.0mm)		0.42	
2	撿拾平台(PB1) 3KWx1	3750	3750			2-100-20	20	17.0	23	0.92	PVC纜線(3c-2.0mm)		1.01	
3	再生粒動態秤重(WT2) 1HPx1	1332		1332		2-100-20	20	6.1	50	0.82	PVC纜線(3c-2.0mm)		0.78	
4	控制電源 3KWx1	3750		3750		2-100-20	20	17.0	3	0.92	PVC纜線(3c-2.0mm)		0.13	
5	監視系統 5.0KVAx1	5000			5000	2-100-30	20	22.7	65	0.92	XLPE纜線(3c-5.5mm²)		2.78	
6	底渣震動入料斗(VF1) 6.7HPx1	7659	2553	2553	2553	3-100-20	20	11.6	29	0.79	PVC纜線(4c-2.0mm)		0.87	
7	底渣震動入料斗(VF1) 6.7HPx1	7659	2553	2553	2553	3-100-20	20	11.6	31	0.79	PVC纜線(4c-2.0mm)		0.93	
8	入料斗下方出料輸送機(CV1) 2HPx1	2475	825	825	825	3-100-15	20	3.8	28	0.82	PVC纜線(4c-2.0mm)		0.27	
9	粗分選前磁選機(OB1) 3HPx1	3429	1143	1143	1143	3-100-15	20	5.2	26	0.80	PVC纜線(4c-2.0mm)		0.35	
10	震篩機(Bar Sizer)(SC1) 1.4HPx1	1599	533	533	533	3-100-15	20	2.4	22	0.82	PVC纜線(4c-2.0mm)		0.14	
11	震篩機(Bar Sizer)(SC1) 1.4HPx1	1599	533	533	533	3-100-15	20	2.4	21	0.82	PVC纜線(4c-2.0mm)		0.13	
12	震篩機出料輸送機(上)(CV2) 1.5HPx1	1716	572	572	572	3-100-15	20	2.6	20	0.82	PVC纜線(4c-2.0mm)		0.13	
13	撿拾平台輸送機(CV3) 2HPx1	2475	825	825	825	3-100-15	20	3.8	23	0.82	PVC纜線(4c-2.0mm)		0.22	
14	粗分選後磁選機(OB2) 3HPx1	3429	1143	1143	1143	3-100-15	20	5.2	23	0.80	PVC纜線(4c-2.0mm)		0.31	
15	反擊式破碎機(CR1) 100HPx1	93978	31326	31326	31326	3-250-175	20	142.8	24	0.40	XLPE纜線(4c-60mm²)		0.62	
16	破碎機出料輸送機(CV4) 2HPx1	2475	825	825	825	3-100-15	20	3.8	26	0.82	PVC纜線(4c-2.0mm)		0.25	
17	>19mm反送輸送帶(CV5) 2HPx1	2475	825	825	825	3-100-15	20	3.8	25	0.82	PVC纜線(4c-2.0mm)		0.24	
18	>19mm反送輸送帶(CV6) 2HPx1	2475	825	825	825	3-100-15	20	3.8	20	0.82	PVC纜線(4c-2.0mm)		0.19	
19	震篩機出料輸送機(下)(CV7) 2HPx1	2475	825	825	825	3-100-15	20	3.8	15	0.82	PVC纜線(4c-2.0mm)		0.14	
20	<50mm分選底渣磁選機(OB3) 3HPx1	3429	1143	1143	1143	3-100-15	20	5.2	24	0.80	PVC纜線(4c-2.0mm)		0.32	
21	彈跳篩(Flip Flow Screen)(SC2) 7.5HPx1	8382	2794	2794	2794	3-100-20	20	12.7	28	0.72	PVC纜線(4c-2.0mm)		0.92	
22	彈跳篩(Flip Flow Screen)(SC2) 7.5HPx1	8382	2794	2794	2794	3-100-20	20	12.7	29	0.72	PVC纜線(4c-2.0mm)		0.95	
23	彈跳篩出料輸送機(上)(CV8) 1.5HPx1	1716	572	572	572	3-100-15	20	2.6	32	0.82	PVC纜線(4c-2.0mm)		0.21	
24	彈跳篩出料輸送機(上)(CV9) 2HPx1	2475	825	825	825	3-100-15	20	3.8	32	0.82	PVC纜線(4c-2.0mm)		0.31	
25	4.9-19mm至渦流輸送帶(CV10) 2HPx1	2475	825	825	825	3-100-15	20	3.8	29	0.82	PVC纜線(4c-2.0mm)		0.28	
26	渦電流出料至秤重(CV11) 1.5HPx1	1716	572	572	572	3-100-15	20	2.6	36	0.82	PVC纜線(4c-2.0mm)		0.24	
27	4.7-19mm再生粒料磁選機(OB4) 3HPx1	3429	1143	1143	1143	3-100-15	20	5.2	30	0.82	PVC纜線(4c-2.0mm)		0.40	
28	渦電流篩選機(EC1)-馬達 7.5HPx1	8382	2794	2794	2794	3-100-20	20	12.7	32	0.72	PVC纜線(4c-2.0mm)		1.05	
29	渦電流篩選機(EC1)-皮帶 3HPx1	3429	1143	1143	1143	3-100-15	20	5.2	36	0.80	PVC纜線(4c-2.0mm)		0.48	
30	渦電流篩選機(EC1)-送料機 ½HPx2	1332	444	444	444	3-100-15	20	2.0	37	0.82	PVC纜線(4c-2.0mm)		0.19	
31	彈跳篩出料輸送機(下)(CV12) 1.5HPx1	1716	572	572	572	3-100-15	20	2.6	28	0.82	PVC纜線(4c-2.0mm)		0.19	
32	<4.7mm再生粒料磁選機(OB5) 3HPx1	3429	1143	1143	1143	3-100-15	20	5.2	36	0.80	PVC纜線(4c-2.0mm)		0.48	
33	再生粒料輸送機(CV13) 2HPx1	2475	825	825	825	3-100-15	20	3.8	35	0.82	PVC纜線(4c-2.0mm)		0.34	
34	集塵設備1(含誘引風機)(FF1) 5HPx1	5715	1905	1905	1905	3-100-15	20	8.7	16	0.79	PVC纜線(4c-2.0mm)		0.36	
35	集塵設備2(空壓機)(FF2) 7.5HPx2	16764	5588	5588	5588	3-100-40	20	25.5	18	0.61	XLPE纜線(4c-5.5mm²)		0.86	
36	水霧和噴系統(含消臭劑) 2HPx1	2475	825	825	825	3-100-15	20	3.8	14	0.82	PVC纜線(4c-2.0mm)		0.14	
37	回收水處理設備 3HPx1	3429	1143	1143	1143	3-100-15	20	5.2	21	0.80	PVC纜線(4c-2.0mm)		0.28	
	總連接負載(相量計算法)	232232	77438	77438	77356	3-600-500	35	352.9	105	0.633	**XLPE纜線2(4-125mm²),E-**	4"-2 可挑金屬管	2.15	

說明:開關箱接線圖另詳大樣圖E-02.

註:1.接線圖內器具規格,管線尺寸等詳左表
2.斷路器ELB規格為0.1sec,30mA
3.未註明(管)以纜架或可挑金屬管或EMT



KWH #MP&P1 受電箱&電錶箱詳圖(既有) NO SCALE



KWH #MP&P1 受電箱&電錶箱接線圖(既有) NO SCALE

工程概要

(1).用電名稱:宜蘭縣政府環境保護局
(2).用電地址:宜蘭縣五結鄉利工二路106-6號
(3).用電電號:45-5083-03
(4).供電方式:3Ø4W 380V/220V
(5).用電設備容量:

原設備容量		本增建工程一變壓器備容量		調整後-總設備容量	
照明:	10.00KVA	照明:	12.50KVA	照明:	22.50KVA
電力:	12.50HP	電力:	208.70HP	電力:	221.20HP
電熱:	0.0 KW	電熱:	0.0 KW	電熱:	0.0 KW
小計:	22.50KVA	小計:	221.20KVA	小計:	243.70KVA

(6).契約容量:現有表燈,本增建工程竣工後 49KW.

REV	DATE	BY	DGN	CHK	DESCRIPTION

主辦機關 宜蘭縣政府環境保護局

合約名稱 宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案

設標廠商 威雲智能股份有限公司

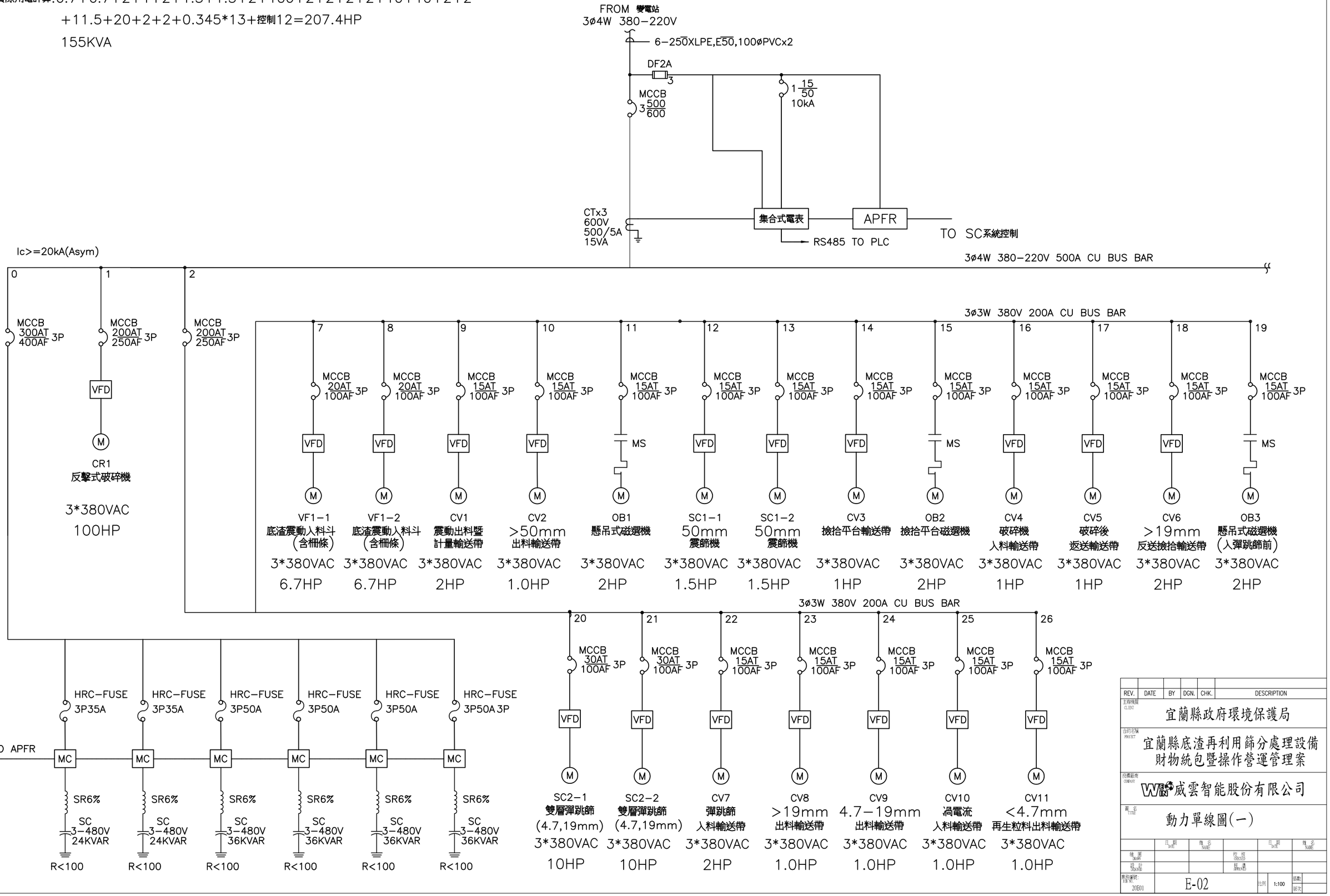
圖名 電氣增設-圖例、接線圖、電力負載表、地籍圖

	日期 DATE	姓名 NAME		日期 DATE	姓名 NAME
繪圖 DRAWN			校核 CHECKED		
設計 DESIGNED			核准 APPROVED		

專務編號 JOB NO. E-01　比例 圖示　頁數 01/05　版次

圖6-1、電力系統架構圖

實際用電計算:6.7+6.7+2+1+2+1.5+1.5+2+100+2+2+2+2+10+10+2+2
+11.5+20+2+2+0.345*13+控制12=207.4HP
155KVA



REV. | DATE | BY | DGN. | CHK. | DESCRIPTION

宜蘭縣政府環境保護局

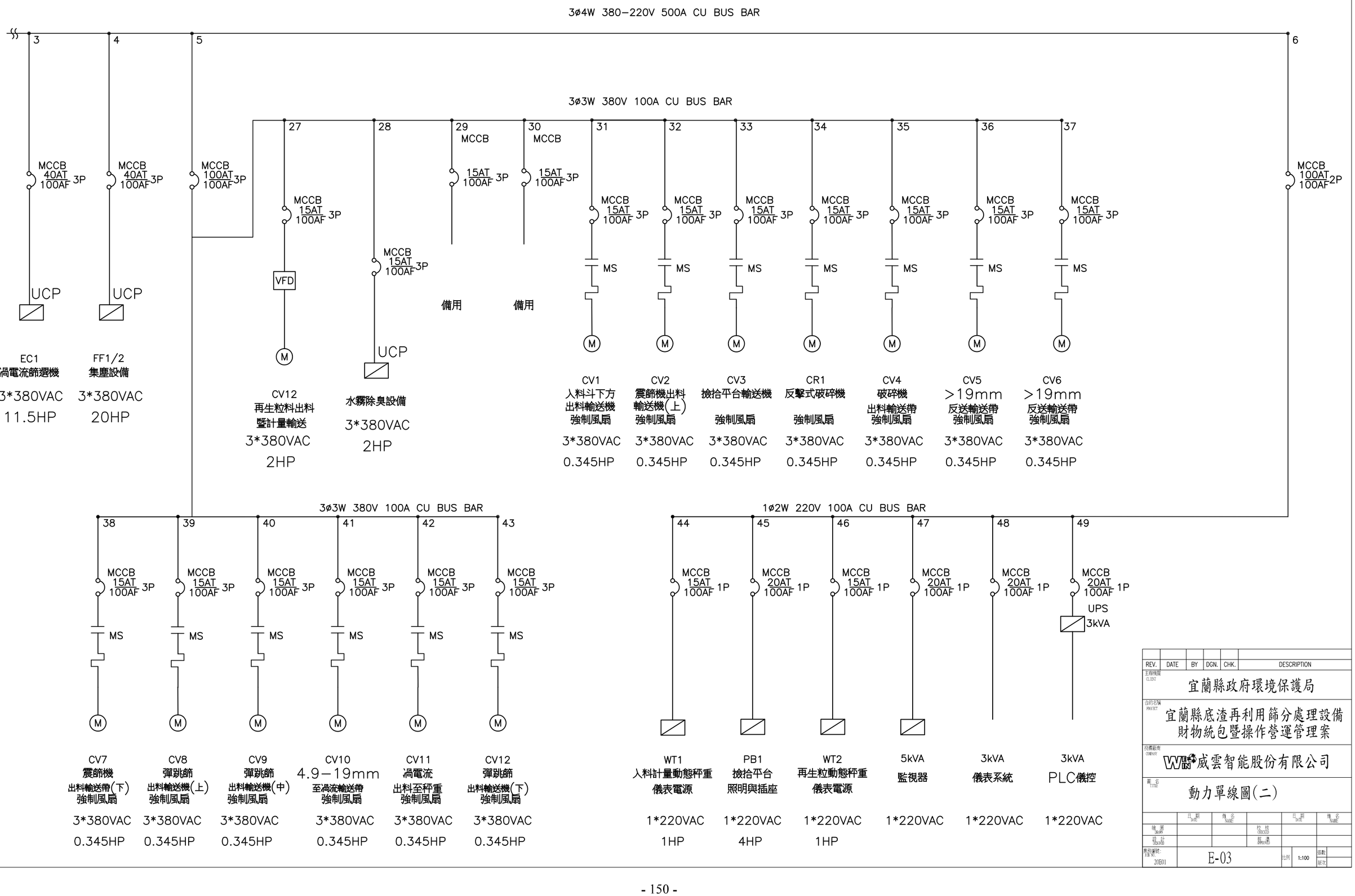
宜蘭縣底渣再利用篩分處理設備
財物統包暨操作營運管理案

威雲智能股份有限公司

動力單線圖(一)

E-02

1:100



REV. | DATE | BY | DGN. | CHK. | DESCRIPTION

主辦機關 CLIENT: 宜蘭縣政府環境保護局

合約名稱 PROJECT: 宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案

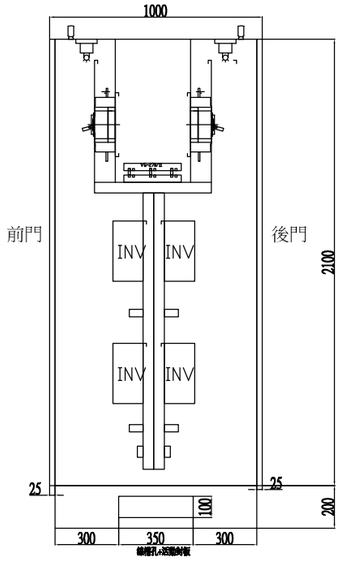
設標廠商 CONTRACT: 威雲智能股份有限公司

圖名 TITLE: 動力單線圖(二)

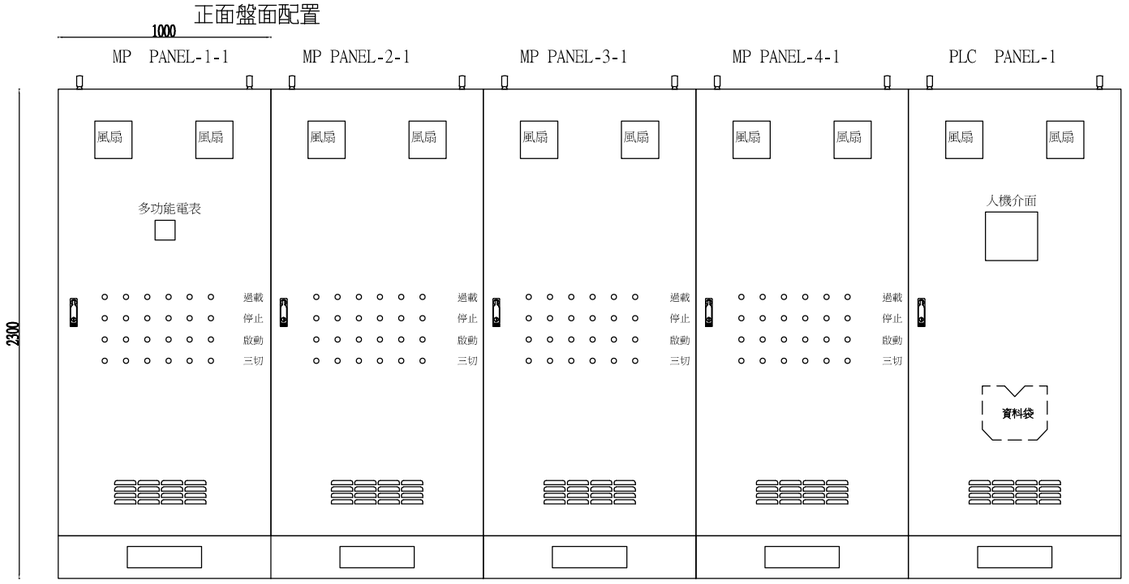
繪圖 DRAWN	日期 DATE	姓名 NAME	校核 CHECKED	日期 DATE	姓名 NAME
描圖 TRACED			核准 APPROVED		

專技證號碼 20E01 | E-03 | 比例 1:100 | 張數 | 版次

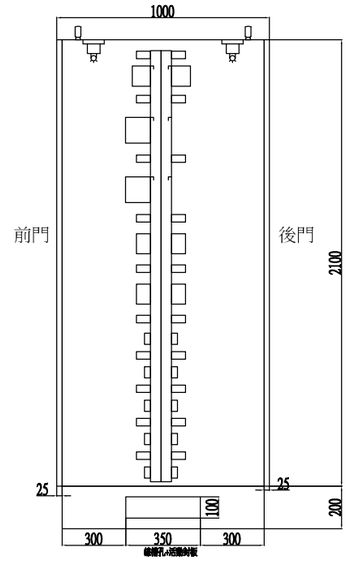
左側視圖



正面盤面配置

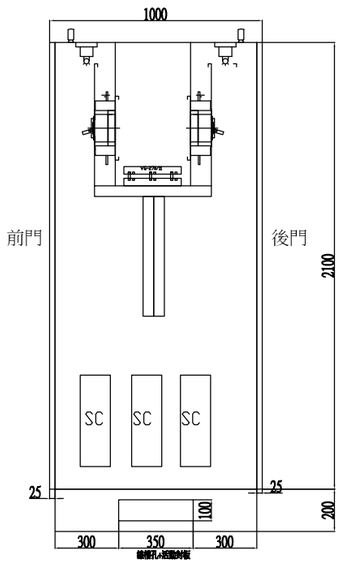


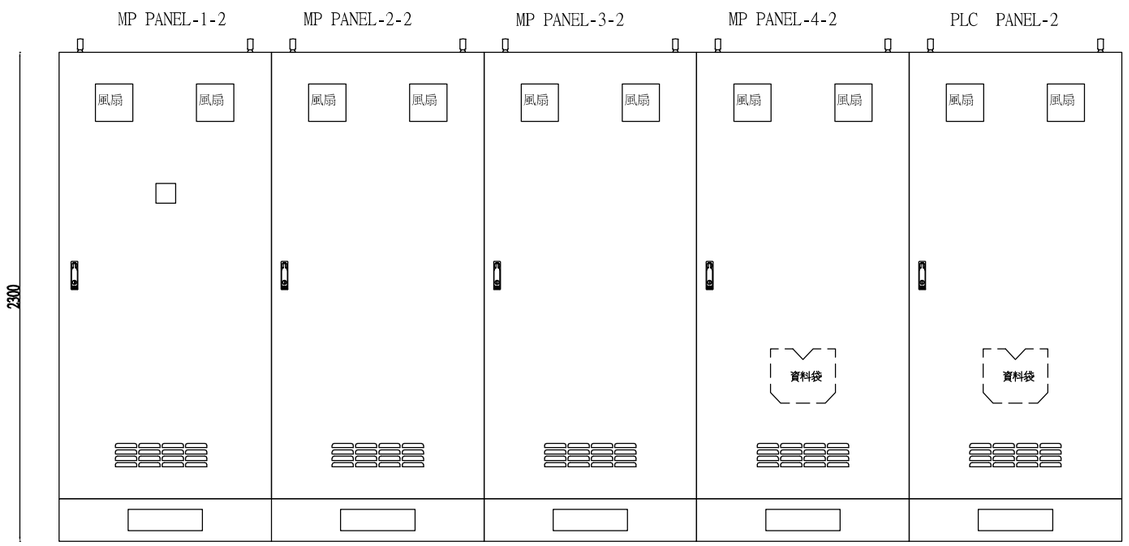
右側視圖



背面盤面配置

左側視圖





線槽孔+活動封板

REV.	DATE	BY	DGN.	CHK.	DESCRIPTION

主辦機關 CLIENT：宜蘭縣政府環境保護局

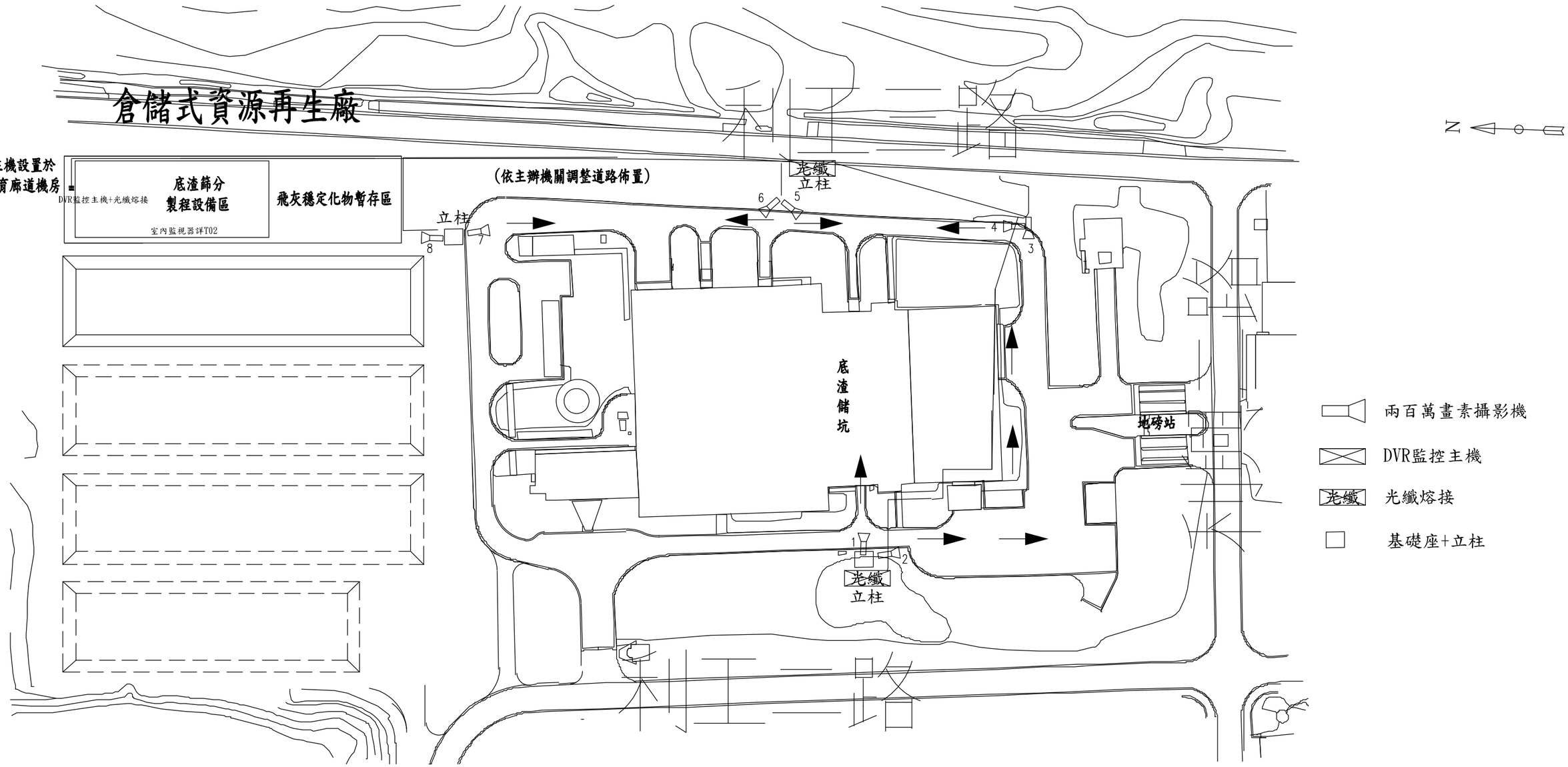
合約名稱 PROJECT：宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案

技術服務商 COMPANY：威雲智能股份有限公司

圖名 TITLE：盤體圖

	日期 DATE	姓名 NAME		日期 DATE	姓名 NAME
繪圖 DRAWN			校核 CHECKED		
設計 DESIGN			核定 APPROVED		

契約編號 CONTRACT NO.：20B01　E-04　比例 SCALE：1:100　張次 SHEET



錄影監視系統設置:
依據垃圾焚化廠焚化底渣再利用管理方式規定辦理
設置地點:
1.廠區所有進出口、地磅系統處，廠內車行所有路徑
2.處理設備投入口、處理流程作業區、衍生廢棄物、焚化再生粒料出料口
3.進場底渣、衍生廢棄物及焚化再生粒料貯存區
4.其他經主管機管指定地點

	配置分區	攝影機數量
(1)	底渣儲坑	既設
(2)	廠內車行路徑	8
(3)	地磅站	既設
(4)	再生廠A出口	既設
	合計	8

REV.	DATE	BY	DGN.	CHK.	DESCRIPTION

主辦機關 CLIENT: 宜蘭縣政府環境保護局

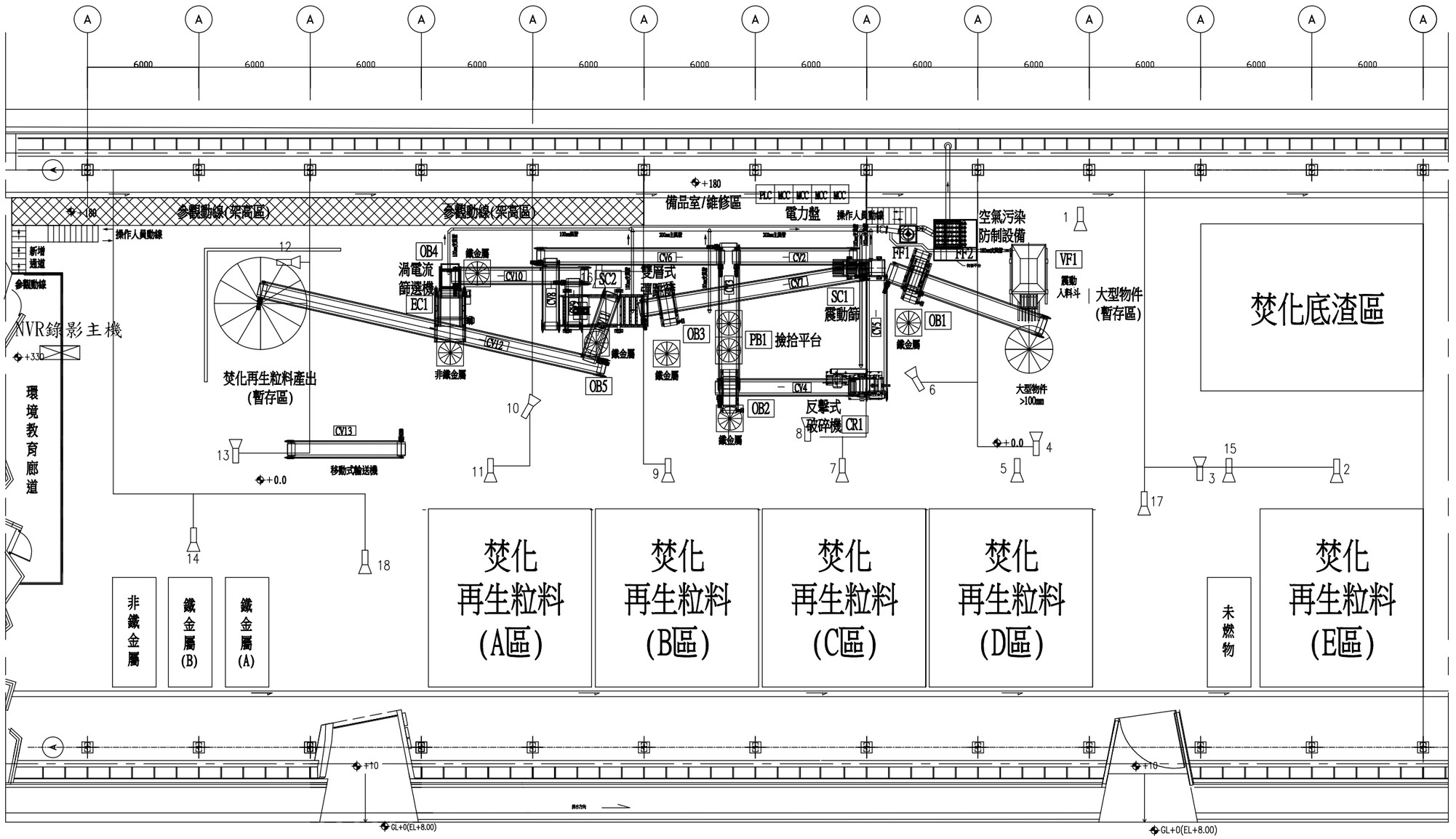
合約名稱 PROJECT: 宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案

統包廠商 COMPANY: 威雲智能股份有限公司

圖名 TITLE: 錄影監視系統位置圖(室外區)

	日期 DATE	姓名 NAME		日期 DATE	姓名 NAME
繪圖 DRAWN	109.7.17	謝佳鳳	校核 CHECKED	109.7.17	謝佳鳳
設計 DESIGN	109.7.17	劉建良	核定 APPROVED	109.7.17	劉建良

契約圖號 CONTRACT NO.: 20B01 | T-01 | 比例 SCALE: 1:100 | 張數 SHEET | 版次 REV.



底渣再利用篩分製程設備錄影監視系統位置圖

錄影監視系統設置:
依據垃圾焚化廠焚化底渣再利用管理方式規定辦理
設置地點:
1.廠區所有進出口、地磅系統處，廠內車行所有路徑
2.處理設備投入口、處理流程作業區、衍生廢棄物、焚化再生粒料出料口
3.進場底渣、衍生廢棄物及焚化再生粒料貯存區
4.其他經主管機管指定地點

	配置分區	攝影機編號		配置分區	攝影機編號
(1)	底渣儲坑	既設	(7)	鐵及非鐵金屬貯存區	14
(2)	地磅站	既設	(8)	未燃物貯存區	15
(3)	再生廠A出口	既設	(9)	大型物件暫存區	4
(4)	再生廠西側出口	17、18	(10)	焚化再生粒料出口	13
(5)	焚化底渣區	3	(11)	焚化再生粒料(A至E區)	2、5、7、9、11
(6)	設備投入口	1	(12)	處理流程作業區	6、8、10、12、16
				合計	18

紅外線IP攝影鏡頭

NVR錄影主機

REV.	DATE	BY	DGN.	CHK.	DESCRIPTION

主辦機關 CLIENT: 宜蘭縣政府環境保護局

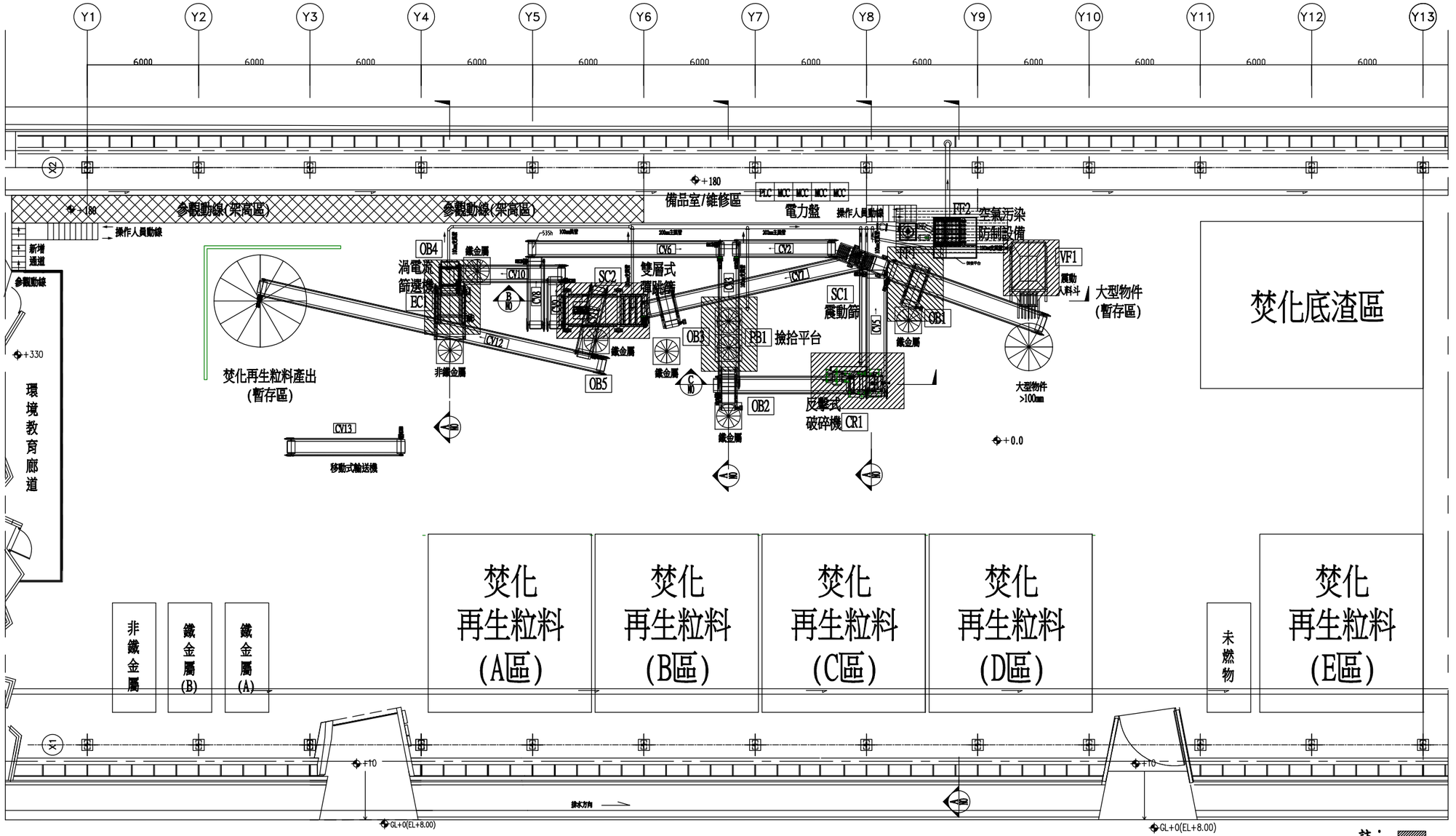
合約名稱 PROJECT: 宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案

設計廠商 COMPANY: 威雲智能股份有限公司

圖名 TITLE: 錄影監視系統位置圖(廠內區)

	日期 DATE	姓名 NAME		日期 DATE	姓名 NAME
繪圖 Drawn	109.7.17	蕭佳凱	校核 Check	109.7.17	蕭佳凱
設計 Designed	109.7.17	劉建良	審查 Examine	109.7.17	劉建良

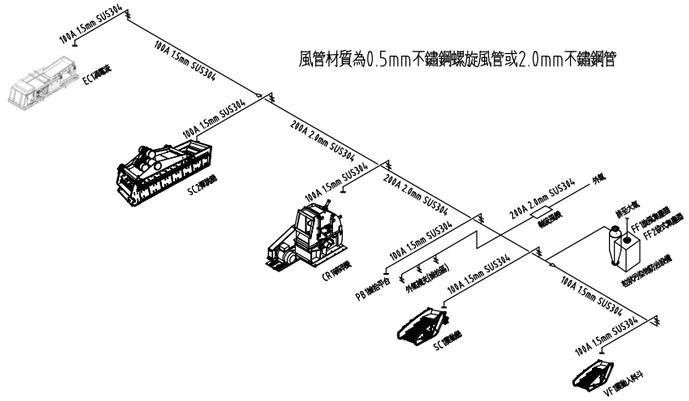
委託編號: 20E01 | T-02 | 比例 1:100 | 張數 版次



底渣再利用篩分粒狀污染物防治設備平面配置圖

	圍封區域	圍封面積(m2)	圍封區域(m3)	圍封方式
(1)	震動入料斗區(VF1)	20.0	72.0	設備加蓋集氣，投入口PVC簾
(2)	50mm震動篩(SC1)	12.0	43.2	設備上方加蓋集氣 設備下方密閉承接輸送
(3)	雙層彈跳篩(SC2)	12.0	43.2	
(4)	反擊式破碎機(CR1)	12.0	43.2	
(5)	撿拾平台(PB1)	12.0	43.2	
(6)	渦電流篩選機(EC1)	12.0	43.2	
設計圍封區域換氣率每小時5次 開口風速控制在0.5m/S 風量為（72+43.2x5）x5/60=24 CMM 取25CMM風量				

空氣污染防治設備圍封區域風量計算表



註：
表圍封區域
表空氣污染設備

REV.	DATE	BY	DGN.	CHK.	DESCRIPTION
主辦機關 CLIENT	宜蘭縣政府環境保護局				
合約名稱 PROJECT	宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案				
技術顧問 CONSULT	威雲智能股份有限公司				
圖名 TITLE	粒狀污染防治設備設計圖(一)				
繪圖 DRAWN	109.7.17	謝佳凱	審查 CHECKED	109.7.17	謝佳凱
設計 DESIGN	109.7.17	謝佳凱	核定 APPROVED	109.7.17	謝佳凱
圖號 DWG NO.	F-01		比例 SCALE	1:100	版次 REV.

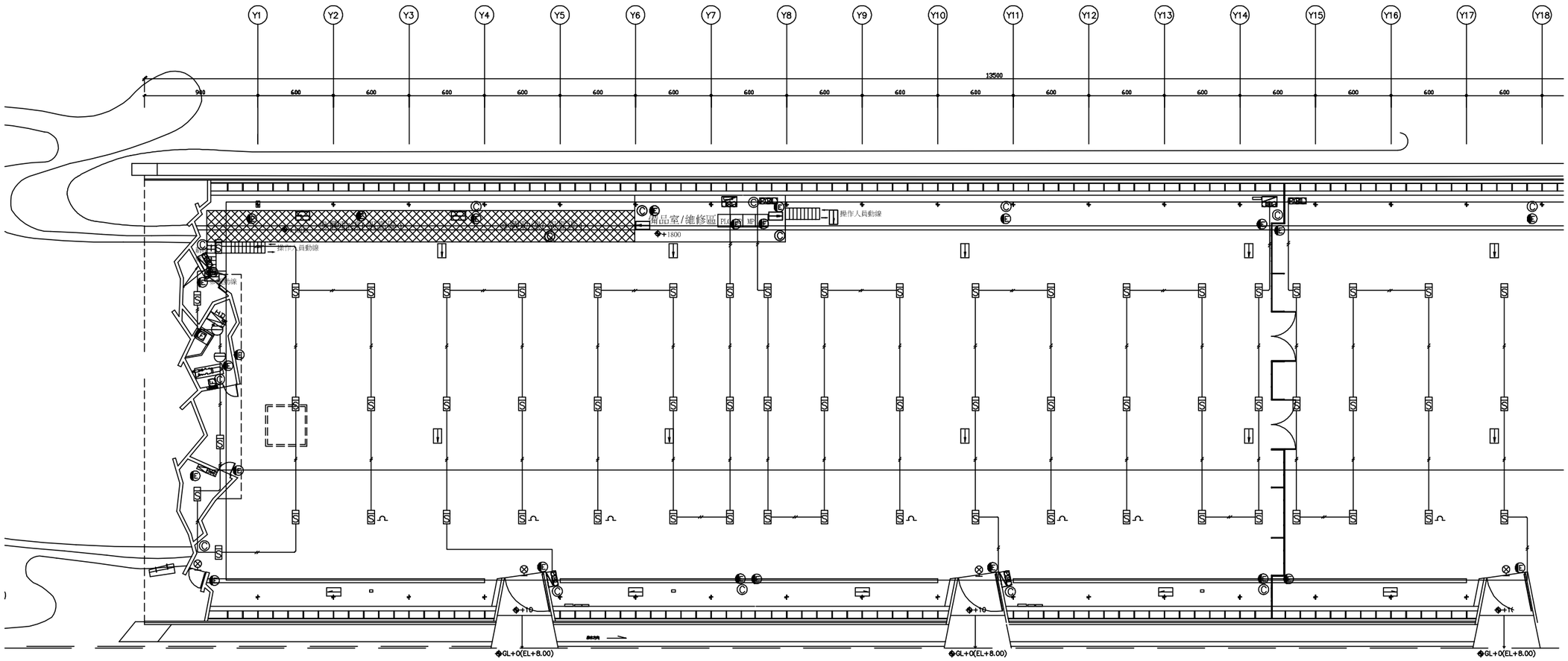


圖　例	品　　名	既有數量	檢討	說　明
	火警受信總機	1	沿用	
	廣播主機	1	沿用	
	消防幫浦	1	沿用	
	綜合消防栓箱	7	沿用	
	火警綜合盤	2	沿用	
	乾粉式滅火器	15	增設3組	備品室/維修區、配電盤、走道
	差動感知器	2	沿用	
	偵煙感知器	74	沿用	
	安全門出口燈	4	沿用	
	避難方向指示燈[單面單向]	6	增設3組	備品室/維修區、配電盤、走道
	避難方向指示燈[雙面單向]	12	增設3組	備品室/維修區、配電盤、走道
	緊急照明燈[壁掛式]	24	增設3組	備品室/維修區、配電盤、走道
	排風扇	4	沿用	
	發電機	1	沿用	
	終端電阻	9	沿用	

說明:
1. 依據"各類場所消防安全設備設置標準"規定，本場所並未變更第12條各類場所按用途，故沿用既設消防設施即可。
2. 本工程將於監視站、配電盤、走道，增設乾粉滅火器、避難指示燈(單面單向)、避難指示燈(雙面單向)、緊急照明燈(壁掛式)。

REV.	DATE	BY	DGN	CHK	DESCRIPTION

主辦機關 CLIENT：宜蘭縣政府環境保護局

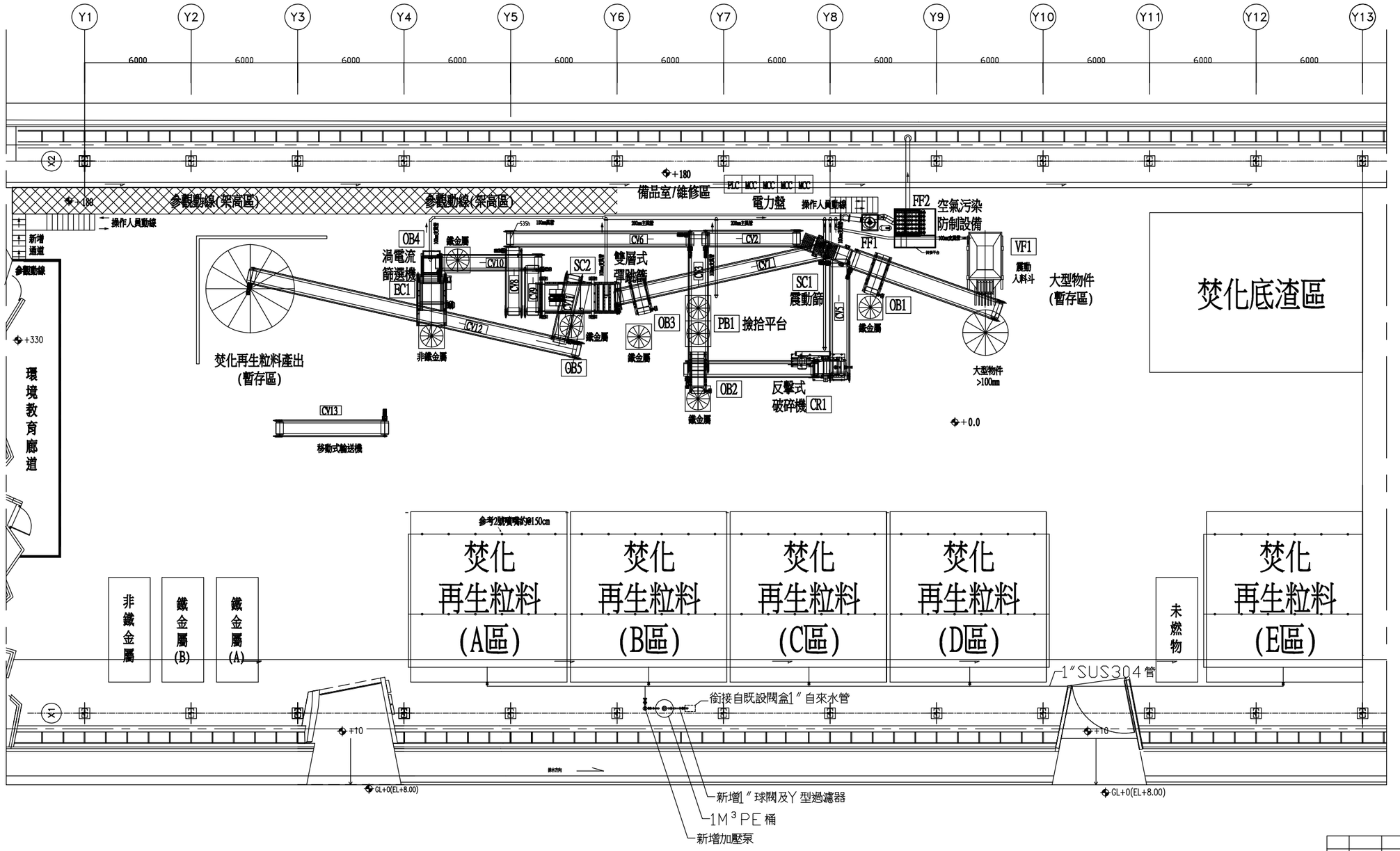
合約名稱 OBJECT：宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案

設標廠商 COMPANY：威雲智能股份有限公司

圖名 TITLE：消防設備檢討圖

	日期 DATE	姓名 NAME		日期 DATE	姓名 NAME
繪圖 DRAWN	109.7.17	曾佳凱	校核 CHECKED	109.7.17	曾佳凱
設計 DESIGNED	109.7.17	劉建良	核准 APPROVED	109.7.17	劉建良

F-02　　比例 1:100



底渣再利用篩分水霧設備平面配置圖

一、水霧設備規格說明:

1.噴嘴2號噴嘴或同級品，間距約150cm計約168只，規格100ml/min(10kg/cm2)，加壓PUMP1.15CMH(10kg/cm2)。

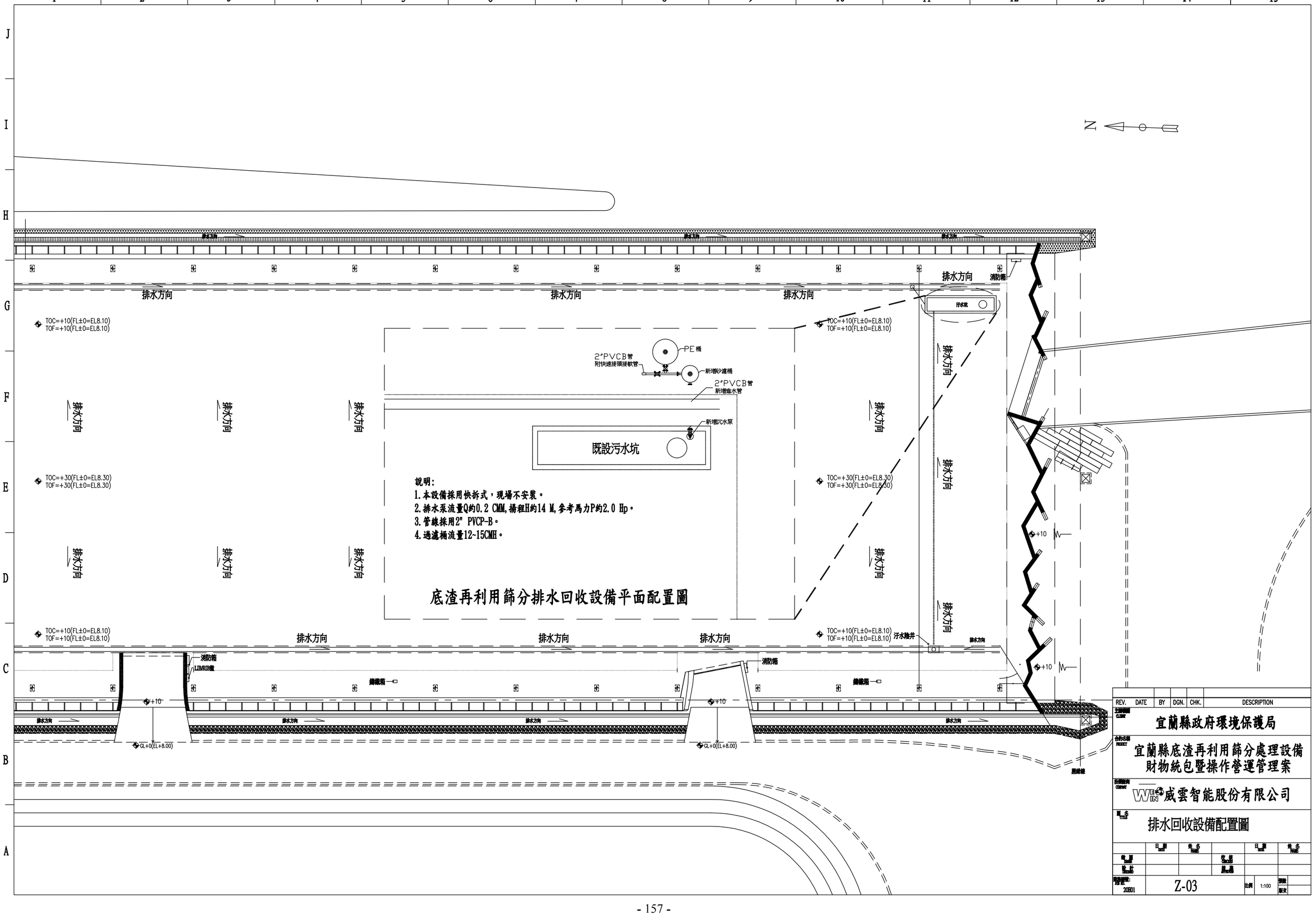
2.管線採用1" SUS304 Sch20S,自來水，引自既設1"閥盒至1M3 PE桶。PUMP出口管線上具面積式浮子流量計，並設有迴流管路路回流至1M3自來水桶。

REV.	DATE	BY	DGN.	CHK.	DESCRIPTION

主辦機關 CLIENT	宜蘭縣政府環境保護局
合約名稱 PROJECT	宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案
技術顧問 CONSULTANT	威雲智能股份有限公司
圖名 TITLE	水霧設備配置圖

	日期 DATE	姓名 NAME		日期 DATE	姓名 NAME
繪圖 DRAWN	109.7.17	簡佳凱	校核 CHECKED	109.7.17	簡佳凱
設計 DES.	109.7.17	簡維良	核定 APPROVED	109.7.17	簡維良

契約編號 CONTRACT NO.	20B01	Z-02	比例 SCALE 1:100



REV.	DATE	BY	DGN.	CHK.	DESCRIPTION

主辦機關 CLIENT
宜蘭縣政府環境保護局

合約名稱 PROJECT
宜蘭縣底渣再利用篩分處理設備財物統包暨操作營運管理案

設計廠商 CONSULTANT
威雲智能股份有限公司

圖名 TITLE
排水回收設備配置圖

	日期 DATE	姓名 NAME		日期 DATE	姓名 NAME
繪圖 Drawn			校核 Checked		
設計 Designed			核准 Approved		

專案管理號: 契約 No. 20E01

Z-03

比例 1:100

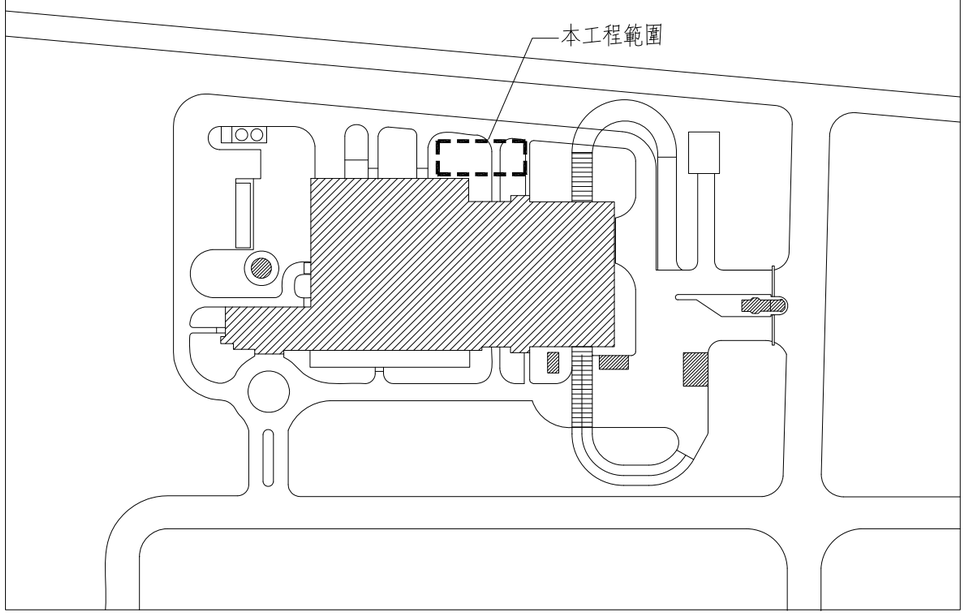
張數 SHEET

版次 REV.

Part C　廚餘廠建廠工程主要圖說

位置圖

利澤垃圾資源回收廠廠區位置圖



工程施工總則說明

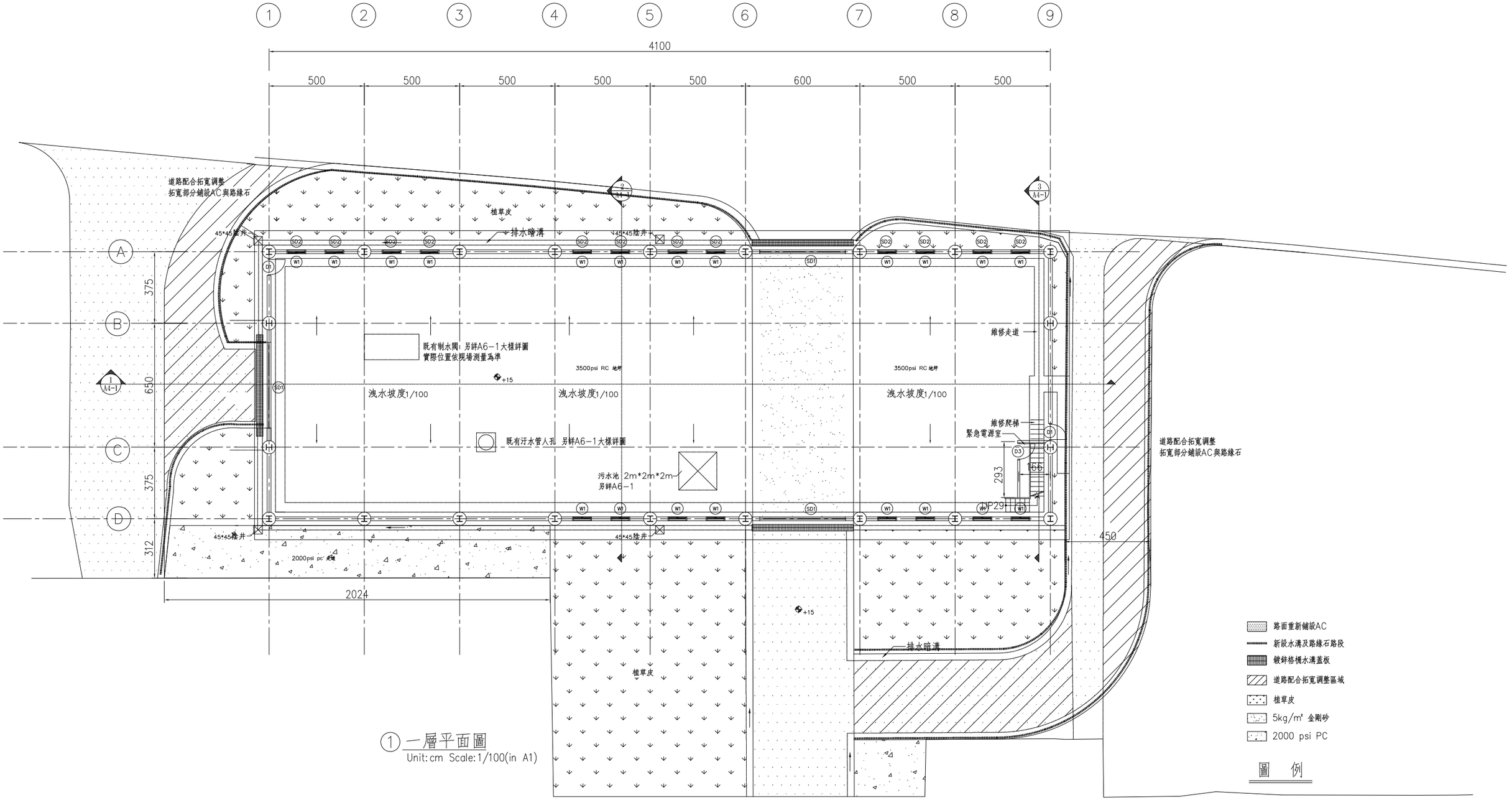
一、本工程工期限制，承包商必須自行預計、控制、吸收因天候因素造成之工時影響。
二、承包商對現場應確實瞭解、勘查、及測量，並對建築物、道路、環境、人員、機具、材料及一切相關問題作全盤了解，且負完全之安全責任（包括保險）及遵守一切建築法與相關法規規定。
三、工程臨時用水電均由業主自理，對運輸、工棚、儲料、用水用電等應有所安置，並設置組合屋做為廠商、業主及監造工程師辦公、開會、樣品、倉庫等場所，並設置符合清潔衛生之浴廁設備，依本工程之實際需求施作於工地現場。
四、承包商應提供工程進度表，以便同時進行其他相關工程協調配合。
五、承包商於簽約後應先行依公共工程委員會相關規定送審施工計畫及品管計畫，先期必須整合建築、消防、水電、空調、汙水及相關使用特殊設施圖說，必要時於開工前或各工種施工前15天於工程協調周(月)利會提出檢討，並就各材料細部設計、送審、工項之訂料、備料及施工事先規劃作業時程。
六、本圖說應配合其他相關圖說及合約，同為本工程合約之一部份，圖說、合約倘未一致時承包商應遵從監造單位提示辦理；有未盡事宜，應先徵詢監造單位及設計單位再行施工。
七、本工程圖面及估價單所標示之任何工程項目，均依總價承包精神施作，工程合約圖說內之材料及施工方式認為不夠詳盡時，承包商得依設計意旨補充詳細之施工大樣圖，送業主及監造單位認可。
八、承包商應將承包各項材料於施工前合理期限事前提出樣品證明及品質保證書，經業主及監造單位會同認可後始可施工。
九、特殊設備項目，承包商必須於施工前送審相關圖說、規格及證明文件，送業主及監造單位核准，方可進行安裝施工。
十、承包商須依工程會要求之工程人員代表常駐工地，負責管理工地、接受監造人員之督導。如有圖說不明，應請監造人員解釋。
十一、本工程各項目進行前承包商應照圖放樣，施工時應依據最新修正之資料並核對現場尺寸，若尺寸放樣與圖面不符，擬具修正方案送交監造單位認可後方可施工，否則一切尺寸由承包商負全責，改善或敲除重做。
十二、本工程施工所需之細部施工大樣施工圖，廠商須提出施工製作圖。
十三、本圖說若經政府核准有案，其主要結構及尺寸部分，承造人必須按圖施工，以符法令，切勿擅自變更，至於施工之一切技術措施、品質管制及建材材質是否屬實，概由承造人之技師及其負責人一切負責。依規定按時申報查驗是否按圖施工；施作未符規範標準者，必須改正或拆除重做到驗收合格。
十四、施工中主要結構部分，應按造規定由承造向當地縣市政府工務局提出各階段查驗，並檢附混凝土及鋼筋相關檢驗報告併案申報開工或展期等手續以備竣工後申請使用執照。
十五、施工中隨時發生之疑問，請立即提出檢討或經由監造單位解釋，必要時向當地縣市政府建管單位書面查詢，切勿擅自解釋法令或施做。
十六、開挖大地如遇有與安全措施圖樣或鑽探報告不符之土壤分布時，應立即通知監造單位檢討修正，否則由承造人負安全責任。
十七、工程進行中，承造人應配合工程進度，適時清理廢料、雜物，隨時保持工地之整潔，完工後並負責將全部屋內外發包範圍及四周道路、溝渠…等清潔點交完成。
十八、注意鄰居房屋及行人之安全，不可將建築材料堆於道路上妨礙交通，建築工地必須安全圍籬，不得讓非工程人員進入。
十九、承造人不得使用下列材料：（1）海砂；（2）含有幅射量之鋼筋。
二十、承包商施工前應配合電器、給排水、消防等相關建築設備工程規定，預留所有開孔及相關管線及箱體配合事項，並於混凝土澆置前，確定尺寸位置。
二十一、所有屋面、陽台、用水空間及路面之坡度應依圖施工排向排水系統，不得有積水現象，並所有防水工程均須於保固期限內防水無虞，如有滲水、漏水情形者應於使用單位通知一周內進行修補，加強或拆除重做。
二十二、本案整地工程依綠建築土方平衡構想，一律將土石挖方運用於基地內必要填方工程（含基地回填、高成整地及景觀堆坡等）之位置，非營建廢棄物不得輸出基地以外範圍，且現地自然表土深度30cm範圍應集中堆放養護，並運用於植栽地表鋪設。
二十三、房屋完成後，應立即拆除工寮，並將房屋周圍水溝、道路清理修復，然後由承造商申請核發使用執照。
二十四、本工程施工完竣於請領最後一期款前，廠商需製作完成點交清冊，內容如下：
（一） 所有建材、設備之施作廠商、名稱、電話、住址。
（二） 可能破損之建材，廠商須提供備品（如磁磚、天花板材、門鎖及其鑰匙…等）
（三） 裝訂壹份符合施工現況之竣工圖說，以便業主日後維修之依據。
二十五、本工程於營造廠商向縣政府工務局申報開工時，以取得自來水公司及台電之外水、外電核可圖說，因此水電承包商應確實詳閱該兩項核准圖說，並與發包圖說核對，若有疑問應立即提出檢討，並應依工程進度及竣工期限於適當時機就外線部分向台電提出申請配電場或台電室（配電室）之詳細施工設計，以便業主於適當時間內繳納規費，順利完成接電作業。
二十六、本工程圖說尺寸皆以圖面標示單位判讀，如有不詳，應依工程慣例或請示監造單位確認後施作之。
二十七、本工程鋼構及金屬工程圖面為表達設計意圖之圖說，承包商於施作前應繪製詳細施工大樣圖，並檢討結構計算書及施工計畫書，經業主及監造單位認可方得施作。
二十八、本工程有關選色樣或影響設計之虞之材料送審或施工事宜，承包商得經監造單位知會設計單位協助確認設計原意。
二十九、承包商應整合水電空調機電圖說。
三十、本圖說施工說明及規範為本工程契約一部分，同時作為廠商詢價參考，業經機關查具相同材料之品質相當或優於圖面者皆可適用。
三十一、放樣工程含每層樑板組模完成後，及需再放樣覆核柱位之位置。
三十二、本工程有關承包商需申報開工、竣工、使照、勘驗等行政事務費，含規費、手續費等均以含括於工程發包經費中。
三十三、自基地樑起每一混凝土澆置完成面之樓層施工縫及屋面，陽、露台樓板吊模6cm以上，另泛水女兒牆衛接應以吊模一體成型施作，另樓梯之施作需與結構體一體成型。
三十四、對於水平面、樓板、結構，必須做到濕置養護三天以上，倘因混凝土澆置施工有瑕疵（含蜂巢、裂縫及滲（漏）水等）；廠商須以所提出改善計畫書修正，蜂巢以無收縮水泥修護，裂縫及滲（漏）水以環氧樹脂修復。

工程範圍說明

一、 基地區分
本案工址座落於宜蘭
二、 整地工程
三、 建築及雜項工程
四、 本次工程含水電

修正			
版次	日期	修正者	內 容

		國興結構技師事務所		圖名 工區位置圖	
初審	核准	繪製 張朝貴	複核 劉國欽	宜蘭縣利澤垃圾資源回收(焚化)廠飛灰穩定化物暫存區設置計畫	圖號 A1-1 / 張數
審核	日期	初核 王月華	日期 971124	比例 / 單位	



① 一層平面圖
Unit: cm Scale: 1/100(in A1)

修正			
版次	日期	修正者	內 容

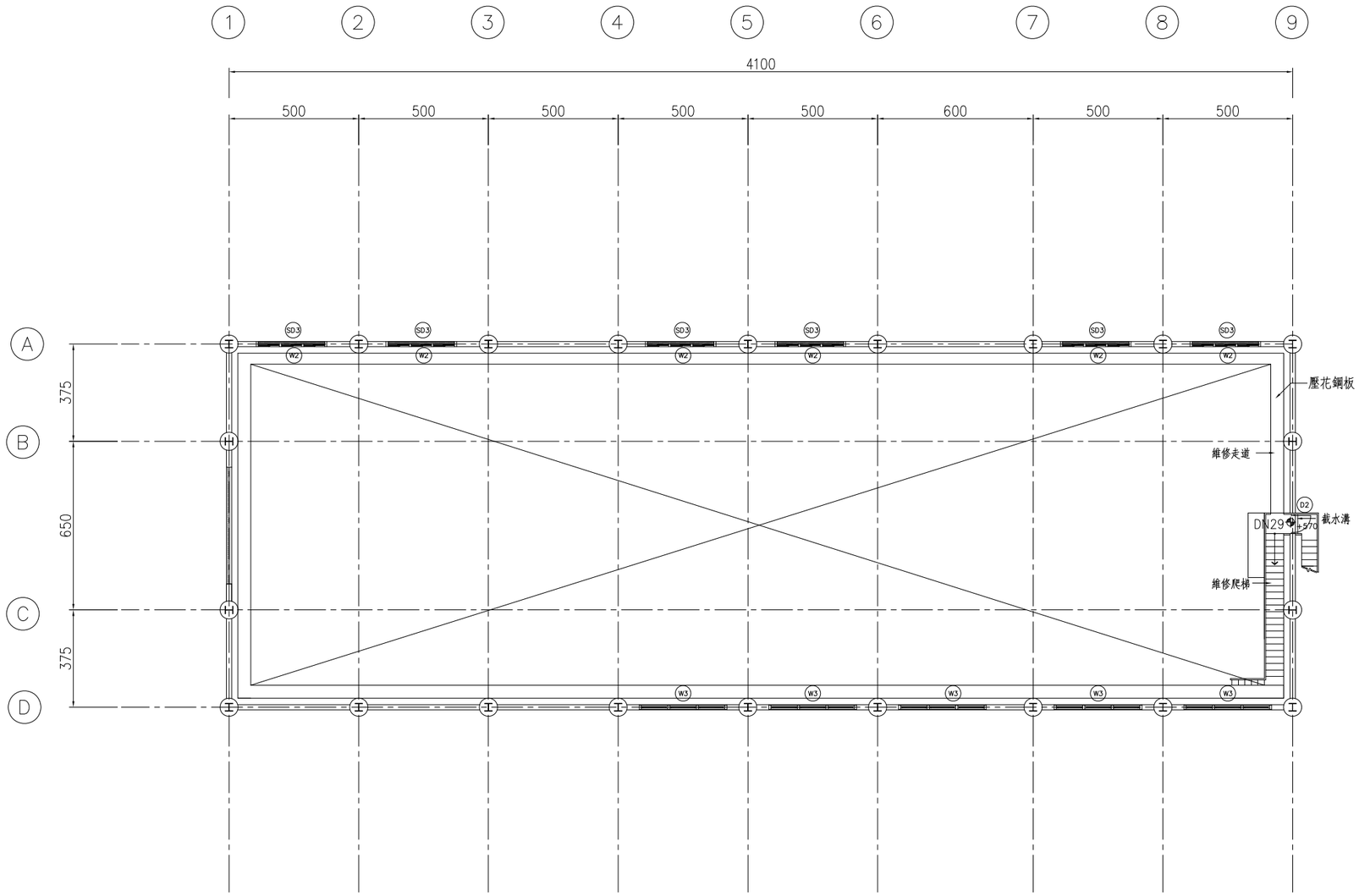
初審	核准	繪製	複核
審核	日期	初核	日期

國興結構技師事務所

宜蘭縣利澤垃圾資源回收(焚化)廠飛灰穩定化物暫存區設置計畫

比例	S:1/100	單位	cm

圖名	一層平面圖		
圖號	A2-1	張數	



① 夾層平面圖
Unit: cm Scale: 1/100(in A1)

修正			
版次	日期	修正者	內 容

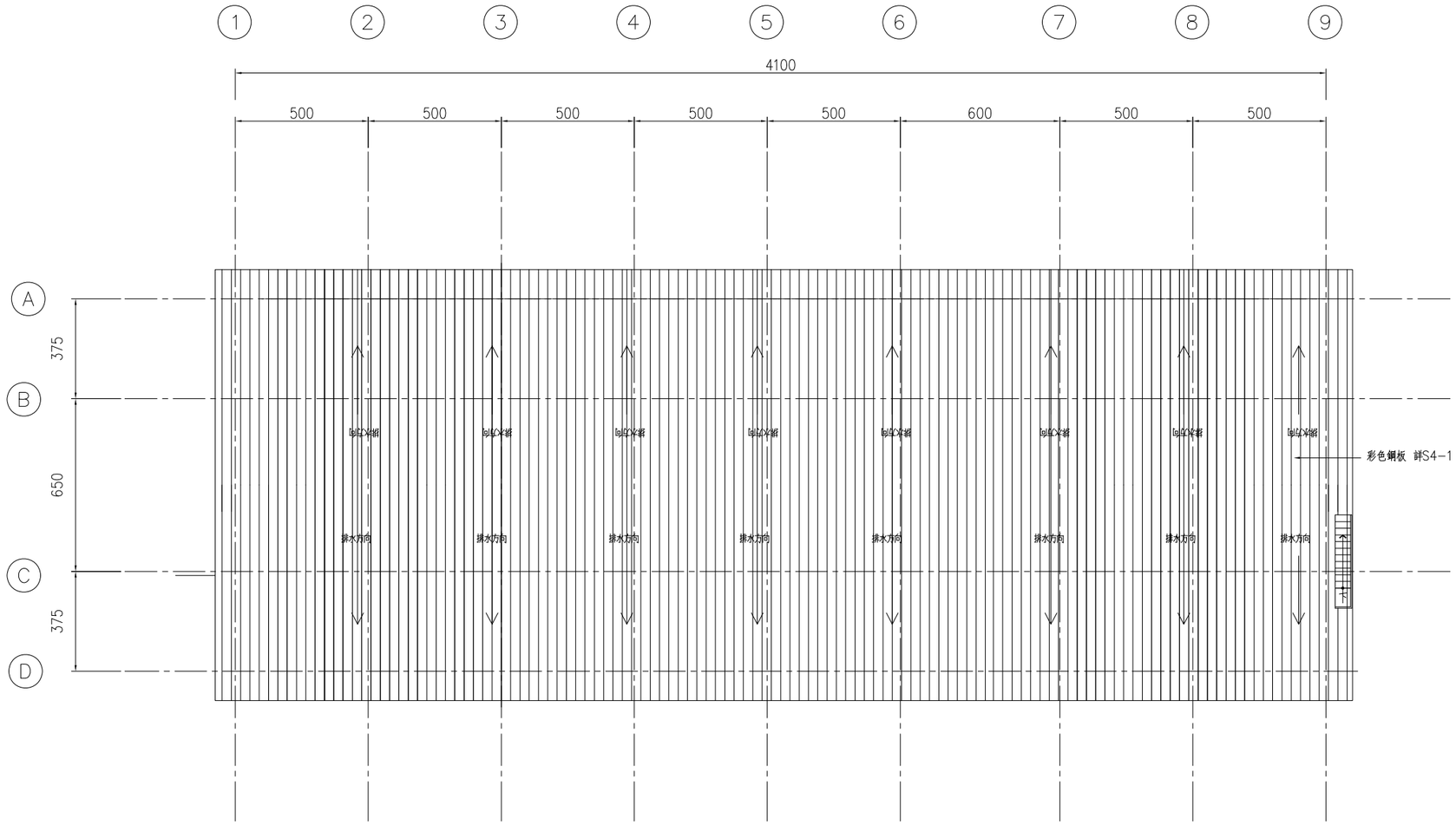
初審	核准	繪製	複核
審核	日期	初核	日期

國興結構技師事務所

宜蘭縣利澤垃圾資源回收(焚化)廠飛灰穩定化物暫存區設置計畫

比例	S:1/100	單位	cm

圖名	夾層平面圖	
圖號	A2-2	張數



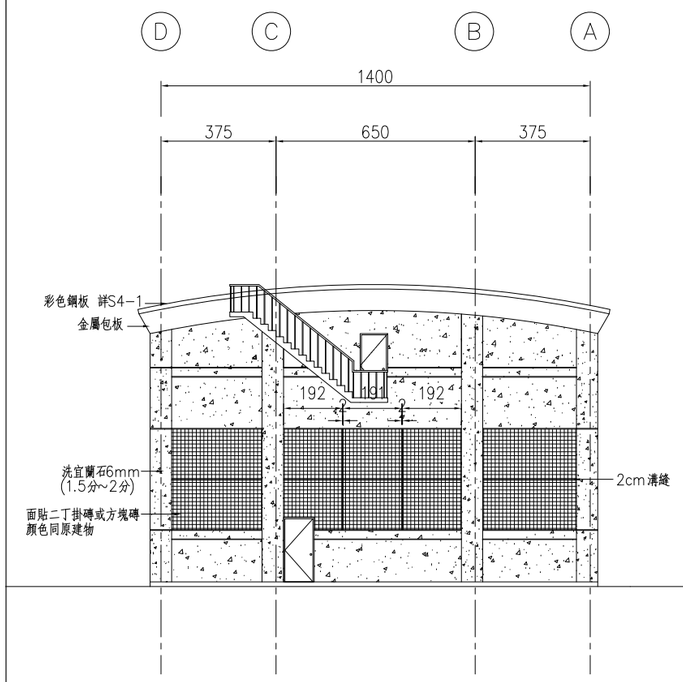
① 屋頂平面圖
Unit: cm Scale: 1/100(in A1)

修正			
版次	日期	修正者	內 容

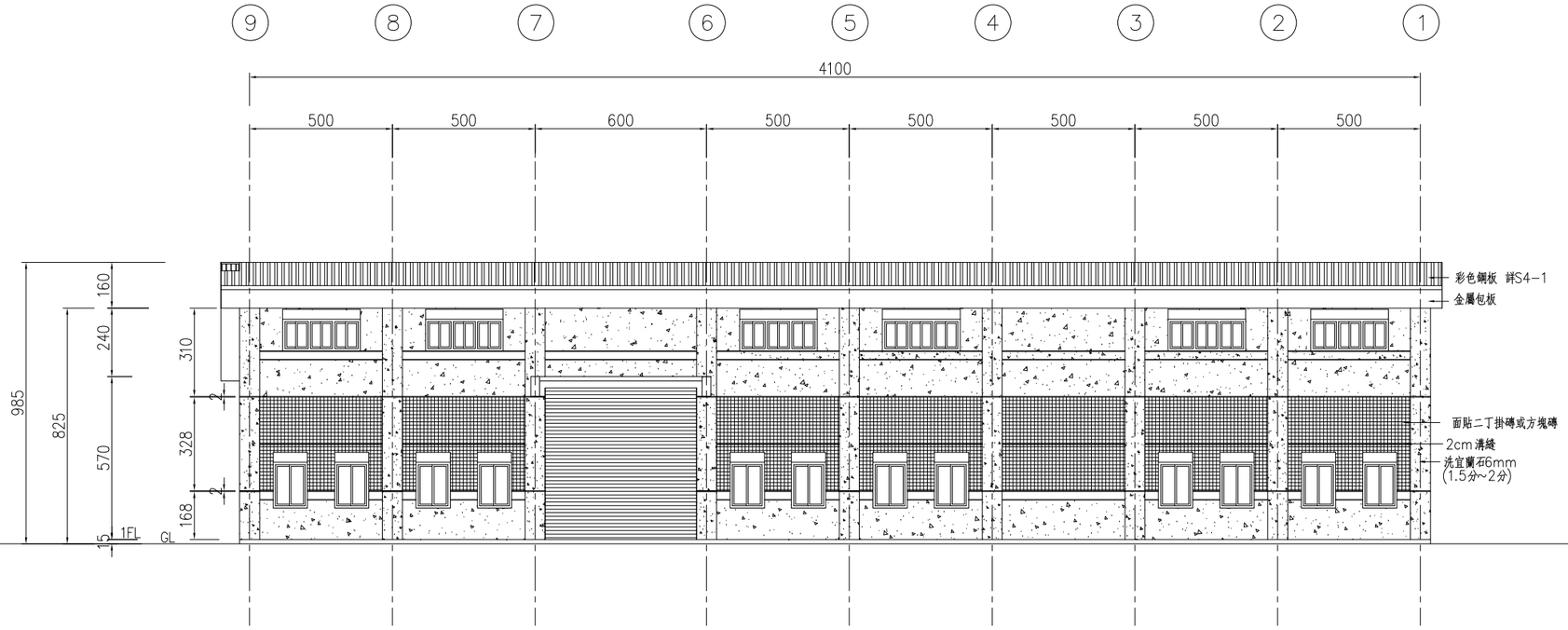
		國興結構技師事務所	
初審	核准	繪製	複核
審核	日期	初核	日期

宜蘭縣利澤垃圾資源回收(焚化)廠飛灰穩定化物暫存區設置計畫		
比例 S:1/100	單位 cm	

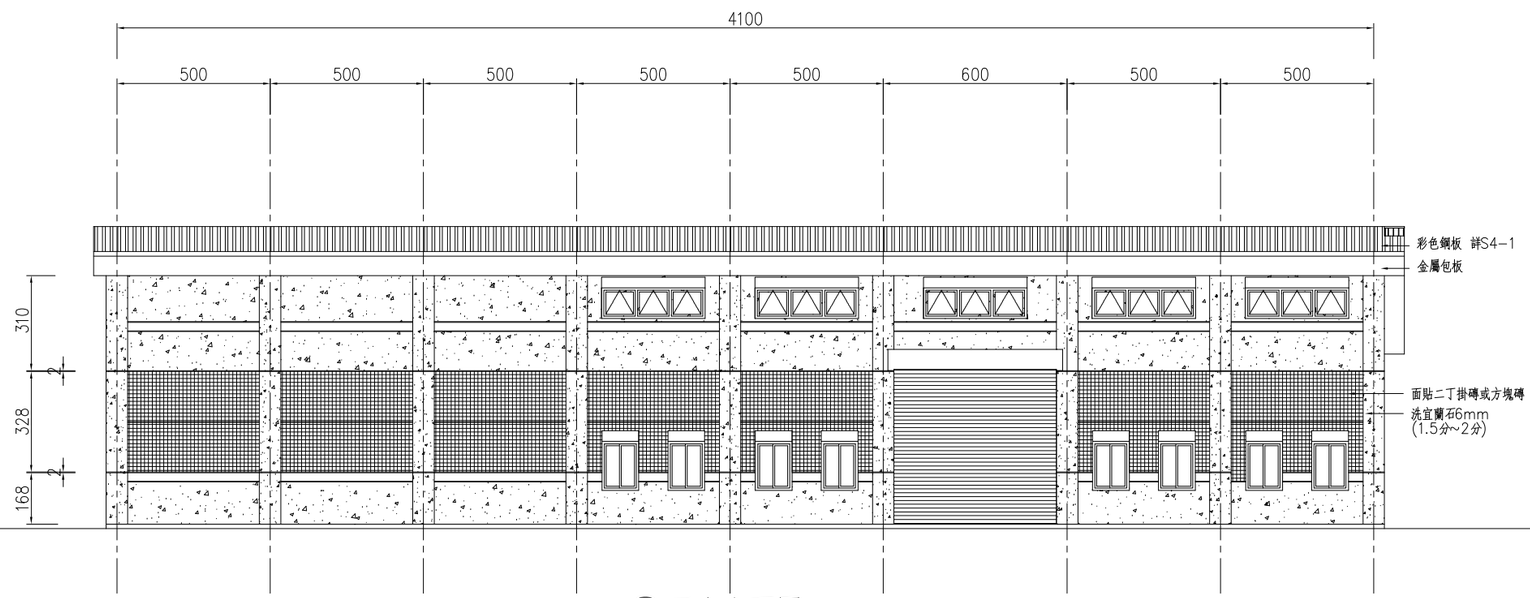
圖名 屋頂平面圖	
圖號 A2-3	張數



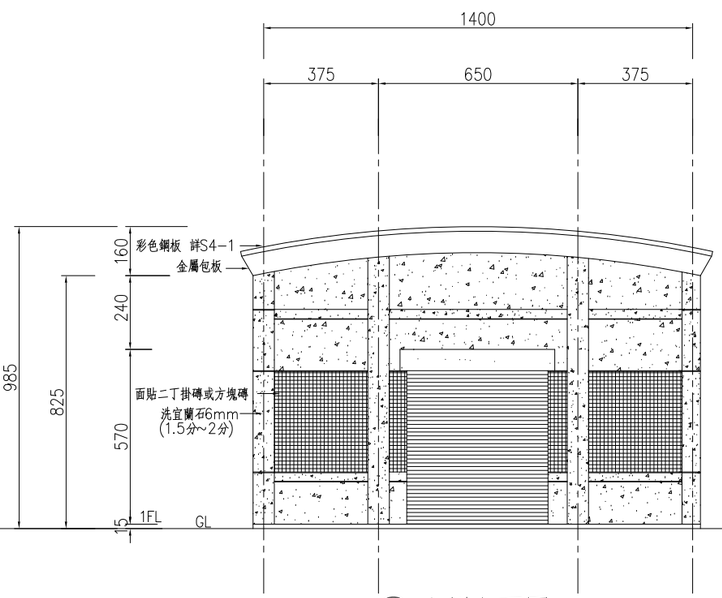
① 右側立面圖
Unit: cm Scale: 1/100(in A1)



② 背向立面圖
Unit: cm Scale: 1/100(in A1)



③ 正向立面圖
Unit: cm Scale: 1/100(in A1)



④ 左側立面圖
Unit: cm Scale: 1/100(in A1)

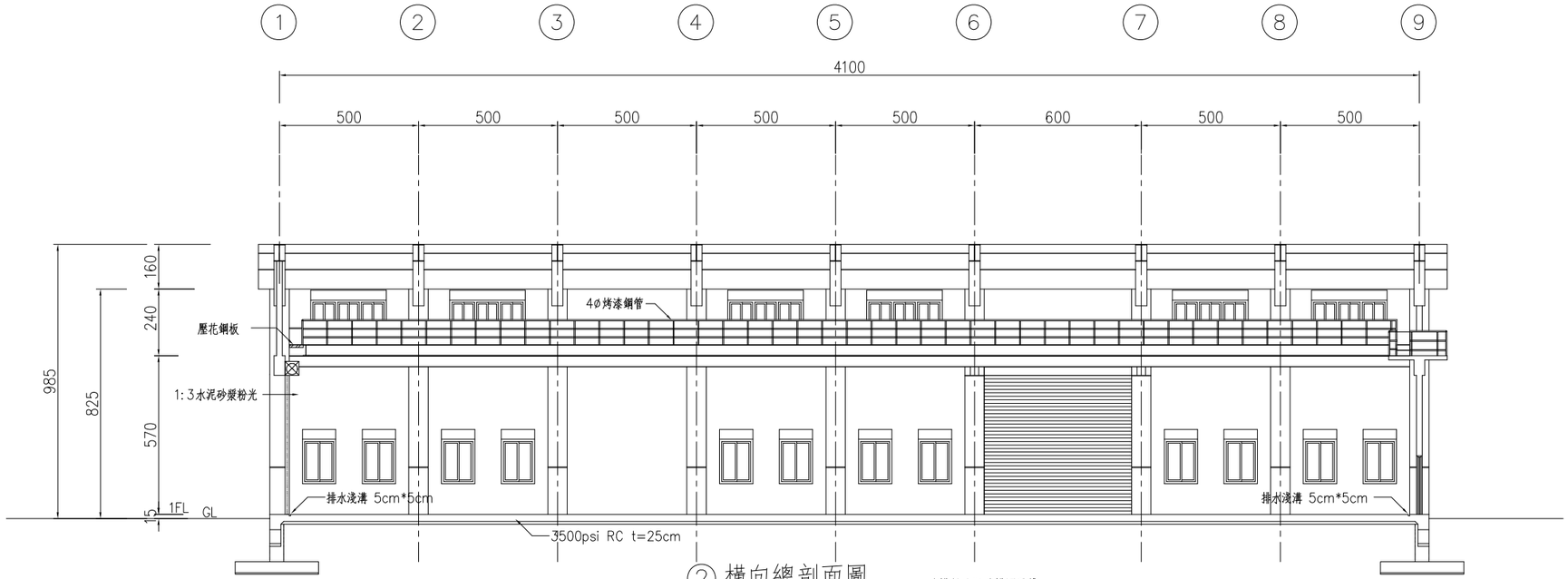
修正			
版次	日期	修正者	內 容

		國興結構技師事務所	
初審	核准	繪製	複核
審核	日期	初核	日期

宜蘭縣利澤垃圾資源回收(焚化)廠
飛灰穩定化物暫存區設置計畫

比例 S:1/100 單位 cm

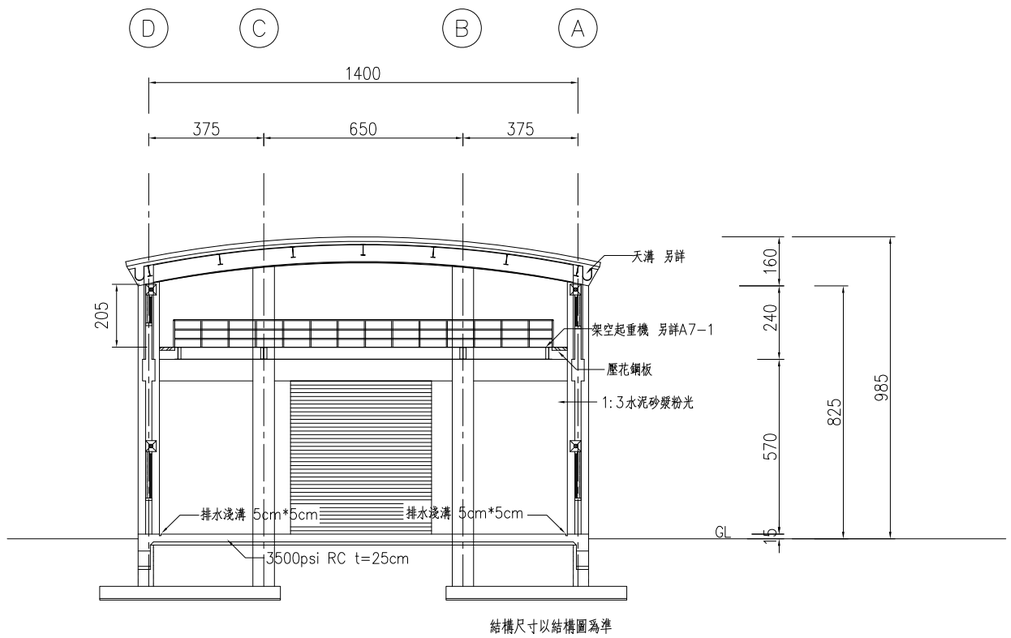
圖名 各向立面圖
圖號 A3-1 張數



② 橫向總剖面圖

Unit: cm Scale: 1/100(in A1)

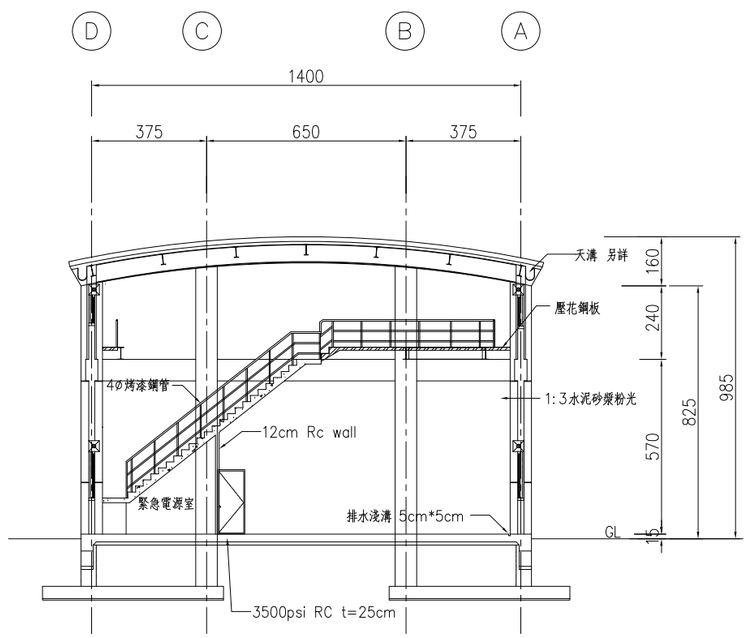
結構尺寸以結構圖為準



結構尺寸以結構圖為準

② 縱向剖面圖

Unit: cm Scale: 1/100(in A1)



結構尺寸以結構圖為準

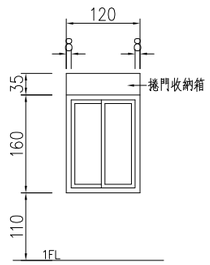
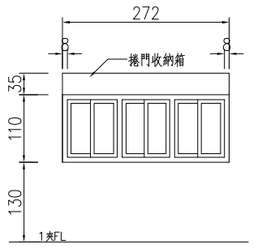
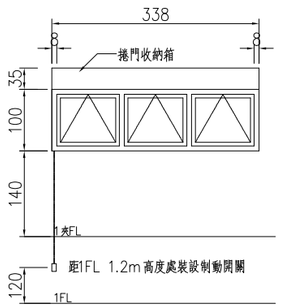
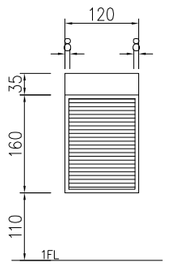
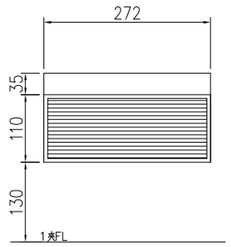
③ 維修梯剖面圖

Unit: cm Scale: 1/100(in A1)

修正			
版次	日期	修正者	內 容

		國興結構技師事務所	
初審	核准	繪製	複核
審核	日期	初核	日期

宜蘭縣利澤垃圾資源回收(焚化)廠飛灰穩定化物暫存區設置計畫		圖名 剖面圖	
比例 S:1/100 S:1/50	單位 cm	圖號 A4-1	張數

編號	W1	W2	W3	SD2	SD3
立面					
尺寸 WxH	W1(120x160)	W2(272x110)	W3(338x100)	SD2(120x195)	SD3(272x145)
材質	鋁窗	鋁窗	自然排煙窗	鐵捲門	鐵捲門
位置	廠房	維修通道	維修通道	廠房	維修通道

編號	D1	D2	D3	SD1
立面				
尺寸 WxH	D1(100x210)	D2(75x210)	D3(90x210)	
材質	不鏽鋼烤漆門	不鏽鋼烤漆門	防火門(F60B)	
位置	人員出入口	維修平台	緊急電源室出入口	
名稱	鋼板烤漆門	鋼板烤漆門	鋼板烤漆門 F(60)A (一小時防火時效，一小時阻熱性)	
門框材質	1.6mm鍍鋅鋼板	1.6mm鍍鋅鋼板	1.6mm不鏽鋼板 #316	
門扇材質	1.0mm鍍鋅鋼板	1.0mm鍍鋅鋼板	1.0mm不鏽鋼板 #316	
門鎖	不銹鋼匣是水平鎖 TC-CL05 LA51/MK WABER 330-05 WCN LM-16S	不銹鋼匣是水平鎖 TC-CL05 LA51/MK WABER 330-05 WCN LM-16S	防火不鏽鋼匣式水平鎖 TC-966(F)/MK WABER330-05 WCN LH-F6002SA	SD1(450x550)
五金	不銹鋼旗型鉸鍊 TC-325x3 WABER 454 WCN LM-16S	不銹鋼旗型鉸鍊 TC-325x3 WABER 454 WCN LM-16S	防火不鏽鋼旗型鉸鍊 TC-325L(F)x3 WABER455 WCN H-57-S	電動防颱式捲門
	半圓門擋 TC-192 WABER 23 WCN LM-16S	半圓門擋 TC-192 WABER 23 WCN LM-16S		進出口

修正			
版次	日期	修正者	內　容

初審	核准	繪製	複核
審核	日期	初核	日期

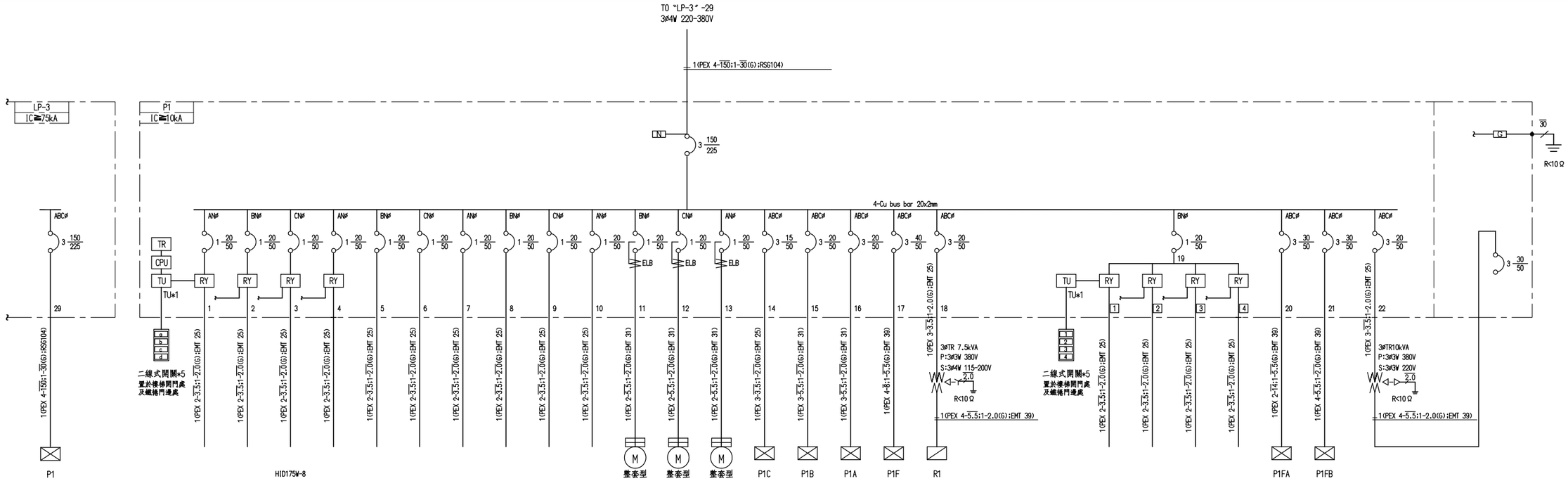
國興結構技師事務所

宜蘭縣利澤垃圾資源回收(焚化)廠飛灰穩定化物暫存區設置計畫

比例 S:1/100 S:1/50　單位 cm

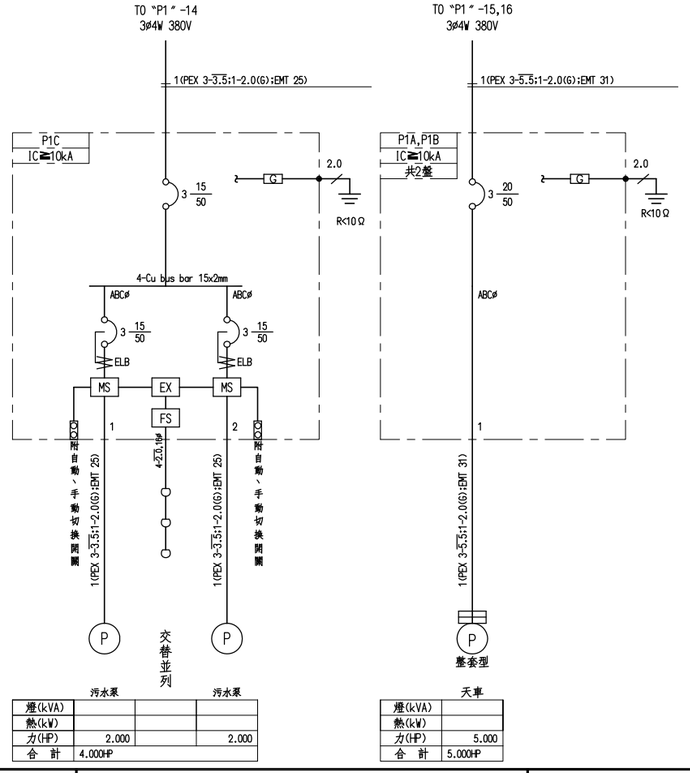
圖名 門窗表

圖號 A4-2　張數



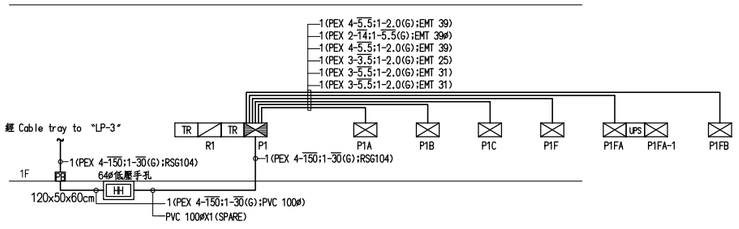
燈(kVA)	43.230
熱(kW)	
力(HP)	23.000

	HID175W-8 FL28W*2-1	HID175W-8	HID175W-8 FL28W*2-1 FL28W*1-1	HID175W-8 FL28W*2-1	維修插座-3	維修插座-3	維修插座-4	維修插座-3	消防燈-11	消防燈-9	鐵捲門	鐵捲門	鐵捲門								FL28W*1-6	FL28W*1-4	FL28W*1-5	FL28W*1-6			維修電源
燈(kVA)	1.860	1.760	1.910	1.860	0.900	0.900	1.200	0.900	0.220	0.180								5.240			0.300	0.200	0.250	0.300	6.250	9.000	10.000
熱(kW)																											
力(HP)											1.000	1.000	1.000	4.000	5.000	5.000	10.000										
合 計	43.230kVA+27.000HP																										



燈(kVA)		
熱(kW)		
力(HP)	2.000	2.000
合 計	4.000HP	

燈(kVA)	
熱(kW)	
力(HP)	5.000
合 計	5.000HP



電氣昇位圖

修正			
版次	日期	修正者	內 容

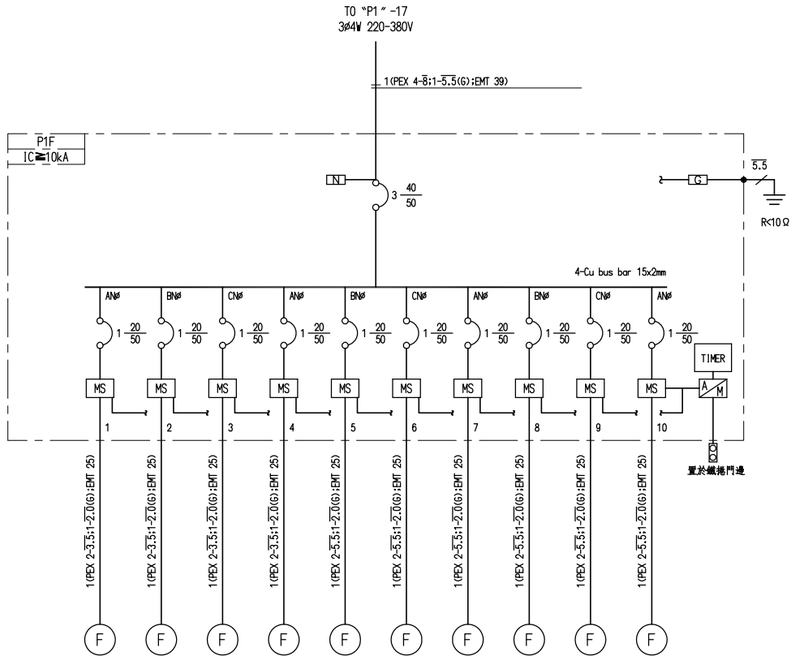
		國興結構技師事務所	
初審	核准	繪製 葉韋呈	複核 劉國欽
審核	日期	初核 張景陽	日期 971201

宜蘭縣利澤垃圾資源回收(焚化)廠飛灰穩定化物暫存區設置計畫

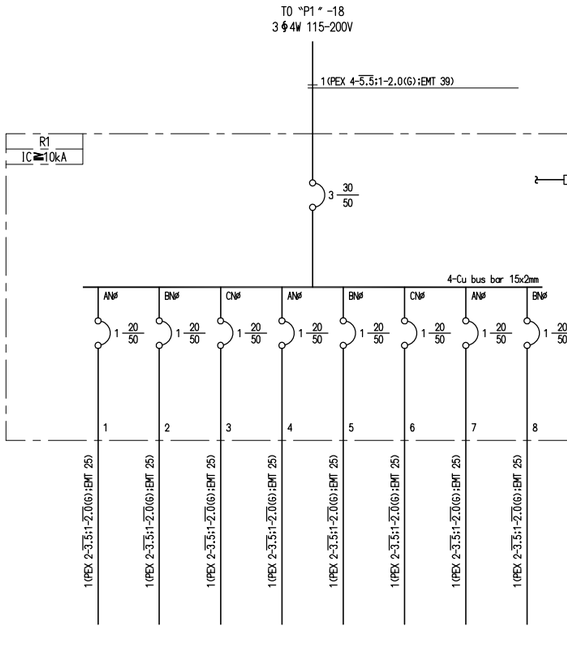
比例 NONE 單位

圖名 單線圖(1) 昇位圖 電氣

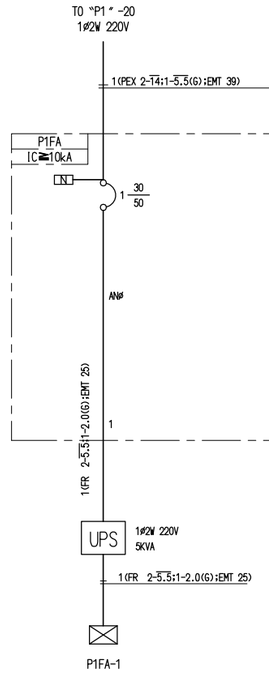
圖號 E-02 張數



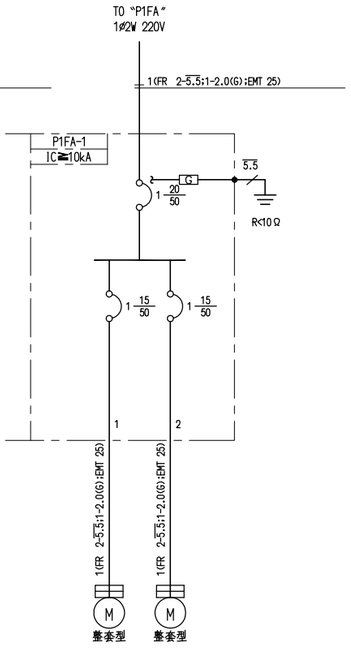
	通風機	通風機	通風機	通風機	通風機	通風機	通風機	通風機	通風機	通風機
燈(kVA)										
熱(kW)										
力(HP)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
合　計	10.000HP									



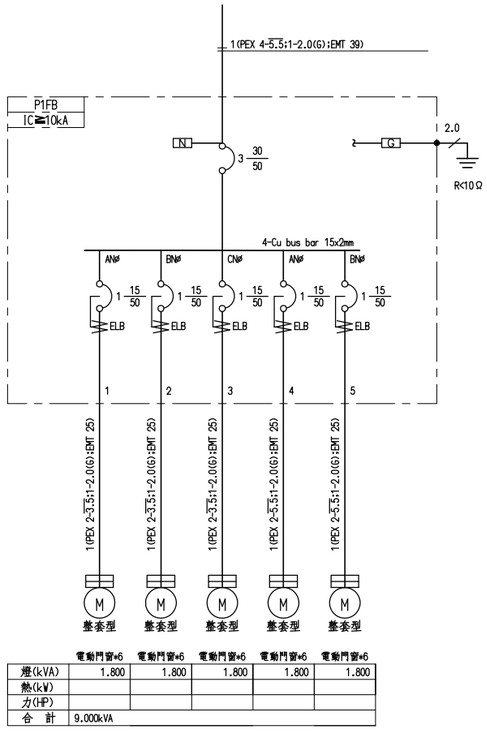
	R180VA-3	R180VA-3	R180VA-4	R180VA-3	R180VA-2	R180VA-3	消防系統電源	廣播系統電源
燈(kVA)	0.540	0.540	0.720	0.540	0.360	0.540	1.000	1.000
熱(kW)								
力(HP)								
合　計	5.240kVA							



燈(kVA)	3.000
熱(kW)	
力(HP)	
合　計	3.000KVA



	自然排煙窗*3	自然排煙窗*2
燈(kVA)	1.800	1.200
熱(kW)		
力(HP)		
合　計	3.000KVA	



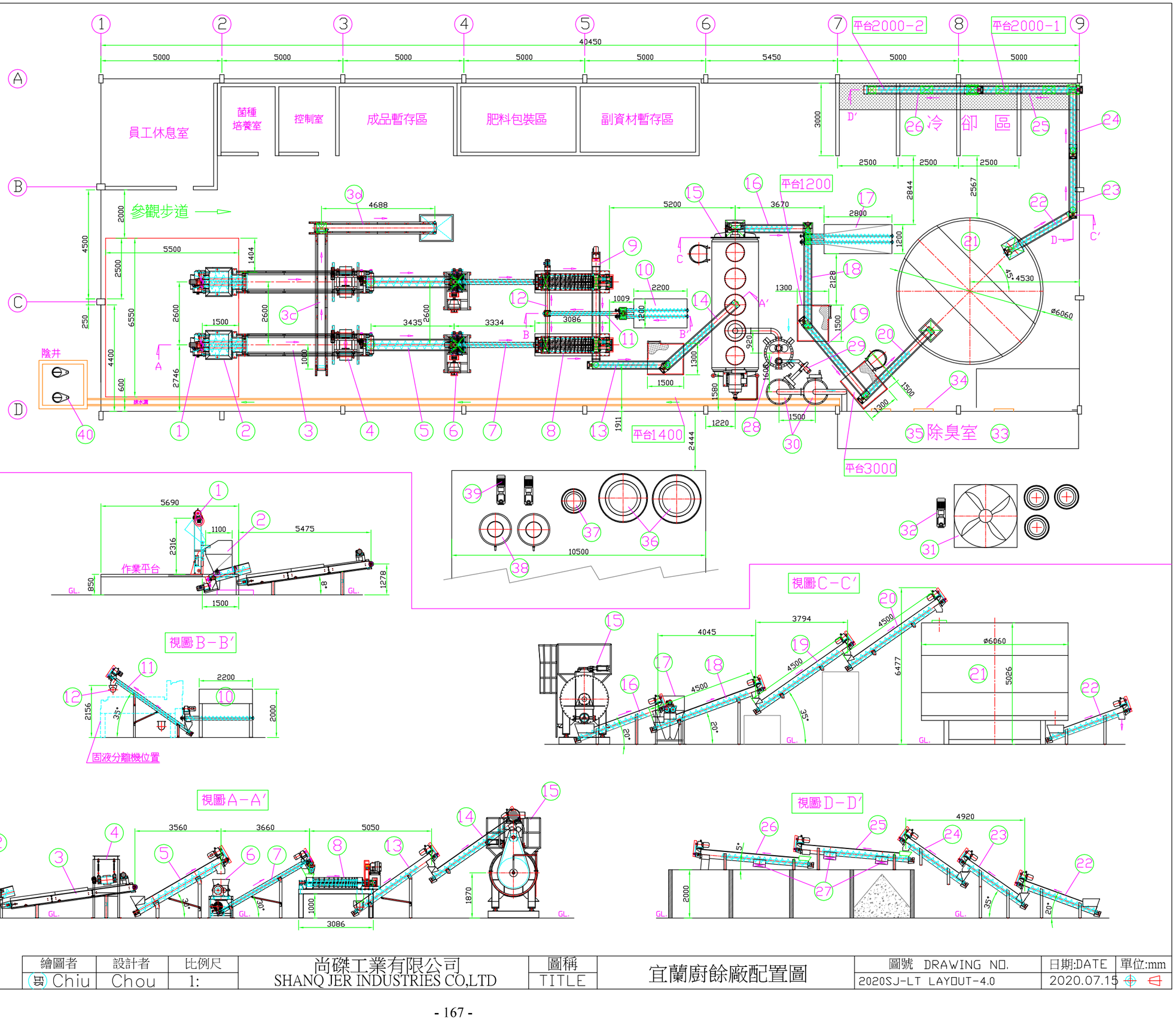
	電動門窗*6	電動門窗*6	電動門窗*6	電動門窗*6	電動門窗*6
燈(kVA)	1.800	1.800	1.800	1.800	1.800
熱(kW)					
力(HP)					
合　計	9.000kVA				

修正			
版次	日期	修正者	內　容

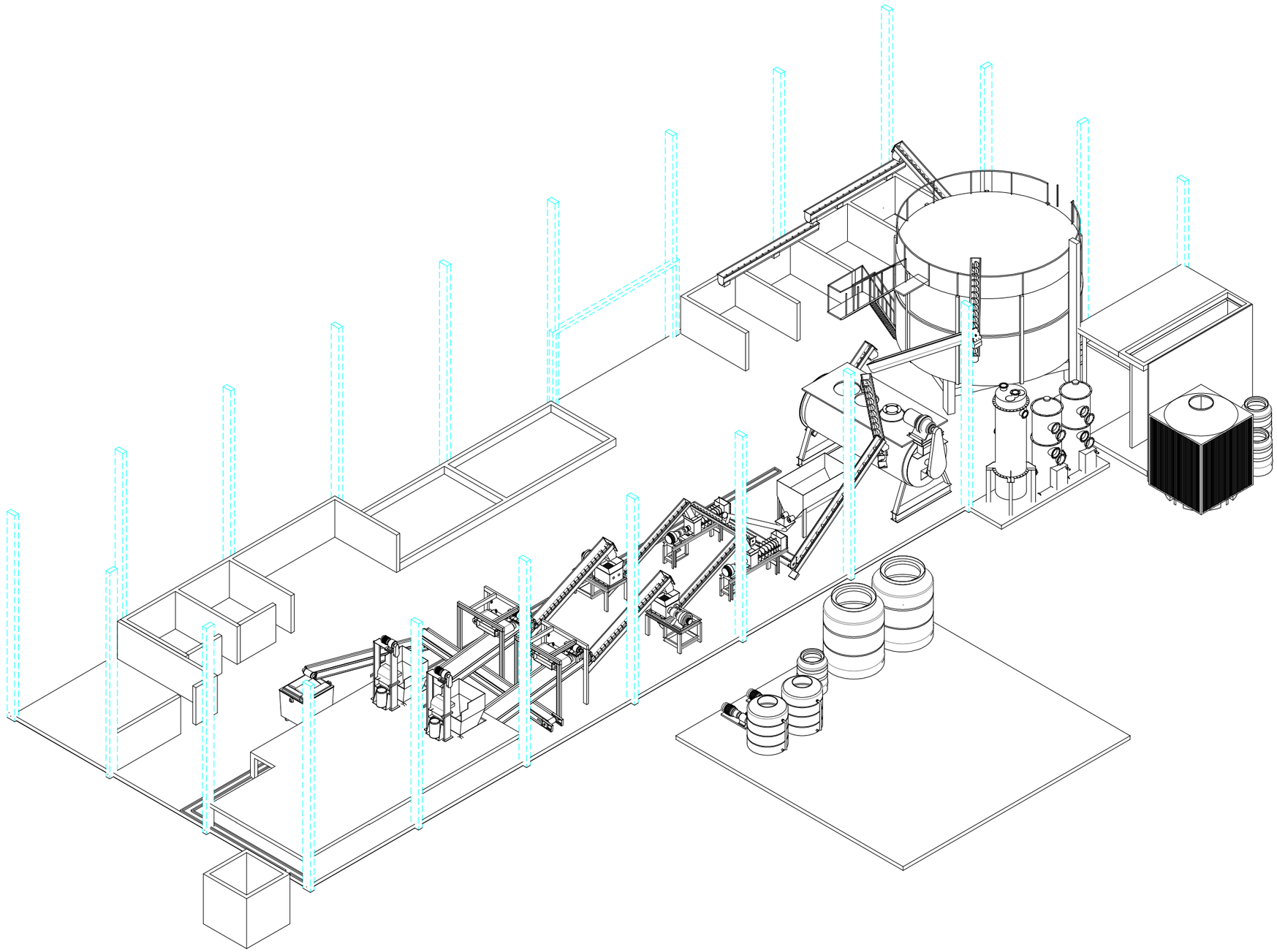
		國興結構技師事務所		宜蘭縣利澤垃圾資源回收(焚化)廠飛灰穩定化物暫存區設置計畫	圖名 單線圖(2) 電氣
初審	核准	繪製 葉韋呈	複核 劉國欽		圖號 E-03 張數
審核	日期	初核 張景陽	日期 971201	比例 NONE 單位	

設　備　清　單

項次	設　備　規　格	馬力(HP)	數量
1	翻桶機	3	2
2	濾水螺運機(1立方米)	2	2
3	檢拾平台輸送帶600WX5000L	2	2
3c	篩除物輸送帶300WX6000L	0.5	1
3d	篩除物輸送帶300WX5000L	0.5	1
4	600型磁選機	2	2
5	U12吋螺運機X4000L	3	2
6	300型雙軸細碎機	20	2
7	8吋螺運機X4000L	2	2
8	280型固液分離機	20	2
9	U10吋螺運機X3800L	2	1
10	6吋雙軸副資材儲槽	2	1
11	U6吋螺運機X3800L	2	1
12	U6吋螺運機X2900L	2	1
13	U10吋螺運機X3800L	2	1
14	U10吋螺運機X4500L	2	1
15	加熱滅菌脫水機Ø1800X5500L	20	1
16	U10吋螺運機X3500L	2	1
17	6吋雙軸成品暫存槽	2	1
18	U10吋螺運機X4500L	2	1
19	U10吋螺運機X4500L	2	1
20	U10吋螺運機X4500L	2	1
21	SK-100型高效能發酵機	40	1
22	U10吋螺運機X3200L	2	1
23	U10吋螺運機X2900L	2	1
24	U10吋螺運機X2900L	2	1
25	U10吋螺運機X4500L	2	1
26	U10吋螺運機X4500L	2	1
27	平面開關500X320		3
28	冷凝器100m2	2	1
29	鼓風機	2	1
30	Ø960洗滌塔	2	2
31	#150冷卻水塔585000Kcal/hr	5	1
32	循環水泵	10	1
33	漂白水噴霧泵	2	1
34	除臭室風扇470CMM	2	4
35	除臭室噴頭		4
36	液肥桶		2
37	液鹼桶		1
38	污水桶		2
39	污水泵	10	2
40	沉水泵	2	2



繪圖者	設計者	比例尺		圖稱		圖號 DRAWING NO.	日期:DATE	單位:mm
Chiu	Chou	1:	尚礫工業有限公司 SHANQ JER INDUSTRIES CO,LTD	TITLE	宜蘭廚餘廠配置圖	2020SJ-LT LAYOUT-4.0	2020.07.15	



序次	修改說明	日期	修改	審核	核准
1					
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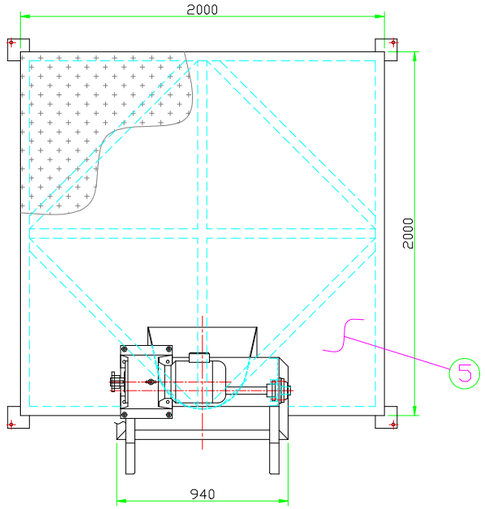
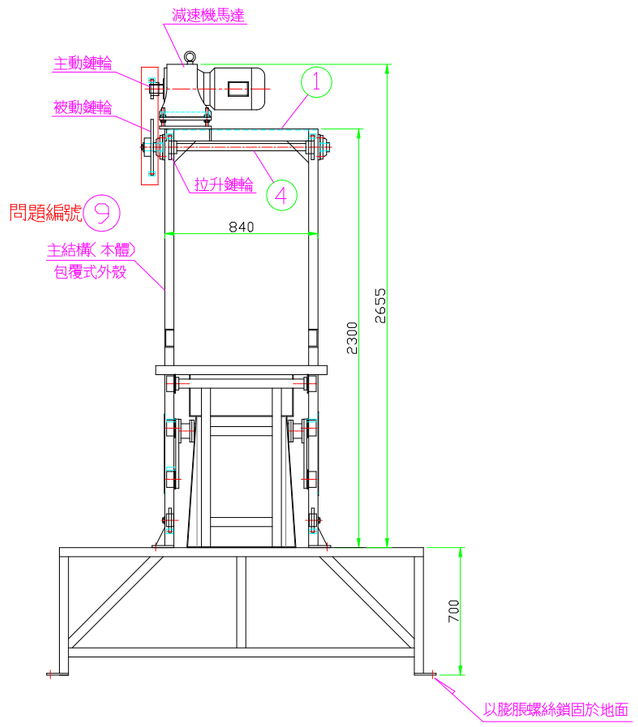
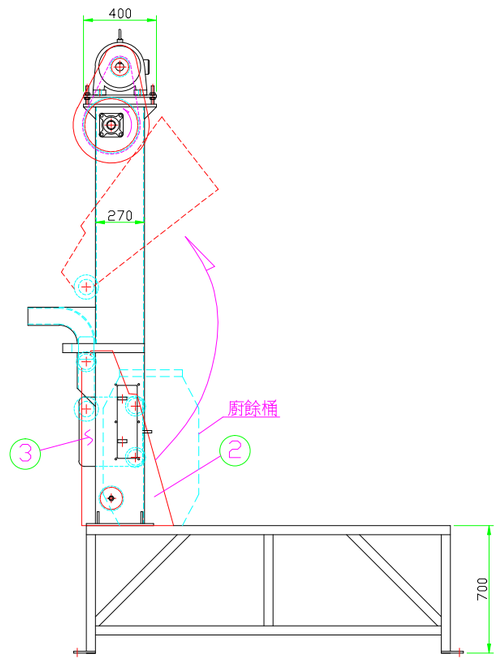
主辦機關	宜蘭縣政府環境保護局	承攬廠商	尚碟工業有限公司
審核		日期	
核准			
繪圖	邱坤昇	日期	109.02.22
核准	周憲政		
比例		單位	mm

標案名稱	108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案
圖名	機械設備配置立面圖
圖號	第 02 頁
版次	







DESIGN DATA

功　能	廚餘桶傾洩	煞車馬達功率	3HP/4PX1具
線速度	102mm/秒	傳動方式	鏈條傳動
減速機	東元齒輪式1/30	連座軸承	UCP-208
主動鏈輪	RS80X12T	被動鏈輪	RS80X36T
拉升鏈輪	RS80X15T		

MATERIAL LIST

NO.	DESCRIPTION	QTY	MATERIAL	REMARKS
1	本　體	1	SUS304	5t
2	桶　座	1	SUS304	4t
3	導輪座	2	SS400	16t
4	軸心	1	S45C	ø40X1015L
5	作業平台	1	SS400	2吋角鋼/3t花紋鋼板

數量：2 組

序次	修改說明	日期	修改	審核	核准
1					
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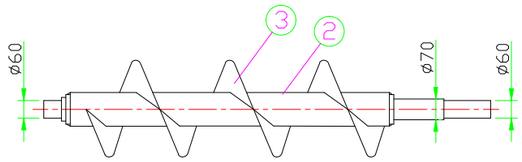
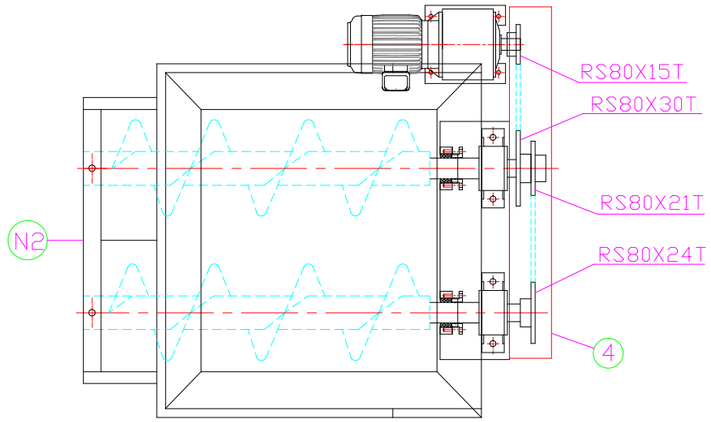
主辦機關：宜蘭縣政府環境保護局
審核　　日期
核准

承攬廠商：尚碟工業有限公司
繪圖 邱坤昇　日期 109.02.22　比例
核准 周憲政　單位 mm

標案名稱：108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案
圖名：翻桶機－含作業平台
圖號：第 03頁　版次

軸心示意圖





DESIGN DATA

功　能	廚餘輸送	馬達功率	1HPX1具
輸送量	5噸/小時	減速機規格	齒輪式, 減速比1/60
自潤軸承(前)	SPF-6060	軸封規格	1/2"石墨迫緊軸封
止推軸承組 共2組	2212X1只/每組 30212X1只/每組	鍵條規格	RS80

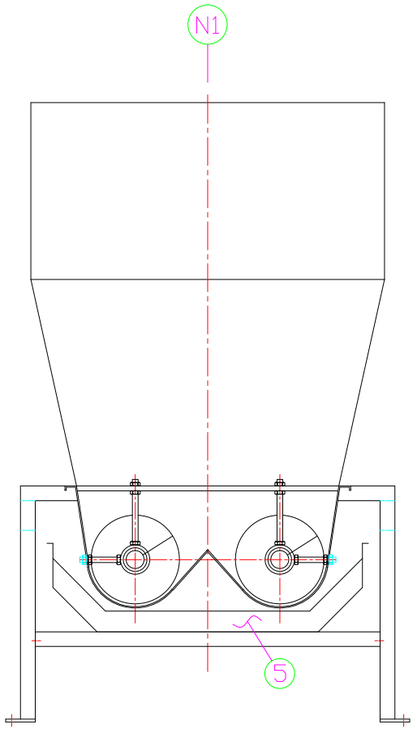
NOZZLE LIST

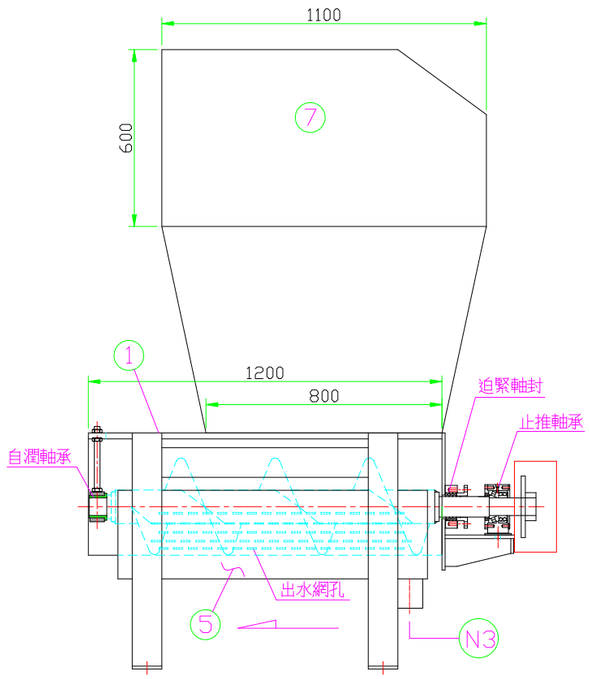
NO.	DESCRIPTION	QTY	SIZE	MATARIAL
N1	廚餘入口	1	1200X1100	SUS304X4t
N2	廚餘出料口	1	截面積≒0.28平方米	
N3	出水口	1	ø3B	SUS304X1.5t

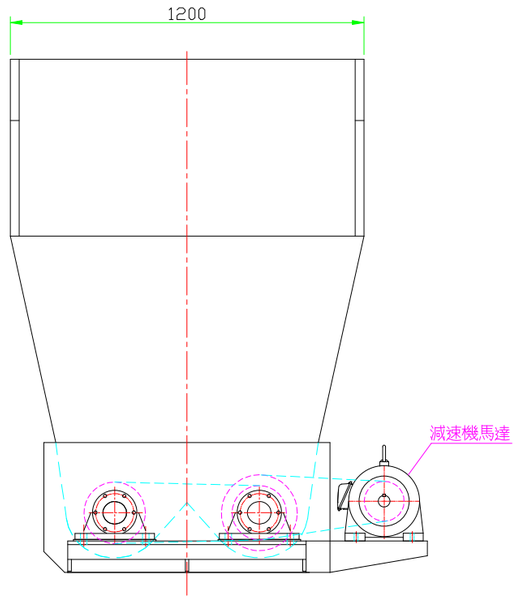
MATERIAL LIST

NO.	DESCRIPTION	QTY	MATERIAL	REMARKS
1	槽形機殼	1	SUS304	U12",4t
2	軸心	1	SUS304	4",SCH80
3	葉片	1	SUS304	5t
4	防護罩	1	SUS304	1.5t
5	水　盤	1	SUS304	1.5t
6	腳　架	1	SS400	4"槽鋼
7	料　槽	1	SUS304	3t

數量：2台





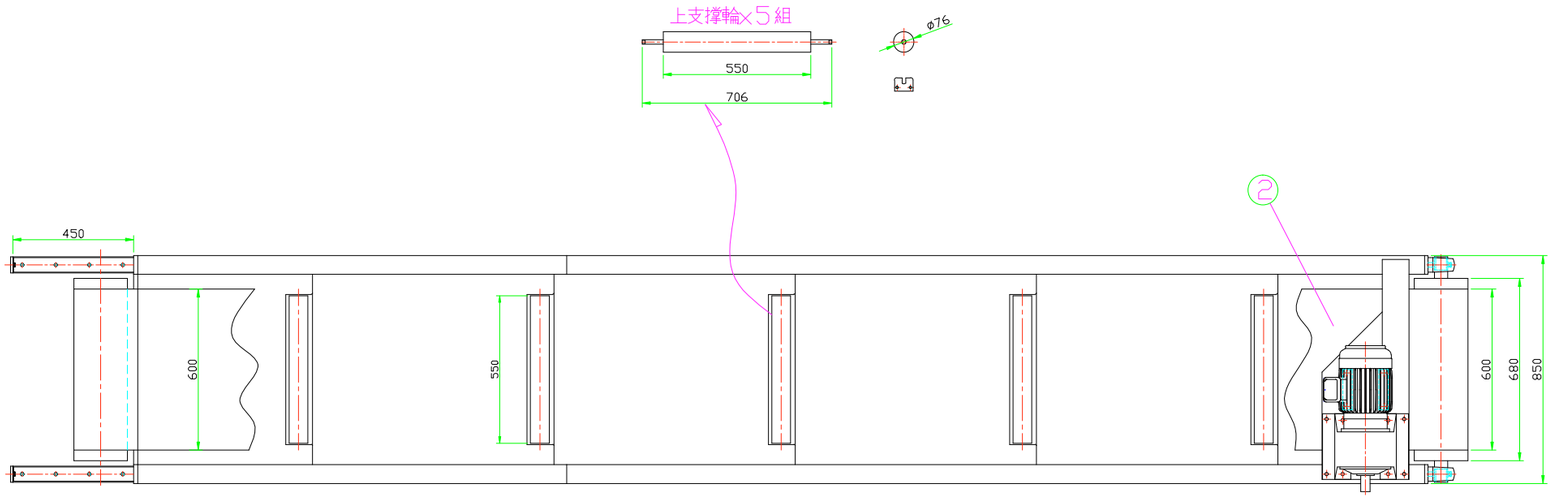


序次	修改說明	日期	修改	審核	核准
1					

主辦機關：宜蘭縣政府環境保護局
審核　　日期
核准

承攬廠商：尚碟工業有限公司
繪圖 邱坤昇　日期 109.02.22　比例
核准 周憲政　單位 mm

標案名稱：108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案
圖名：濾水螺運機－1立方米
圖號　第 04頁　版次



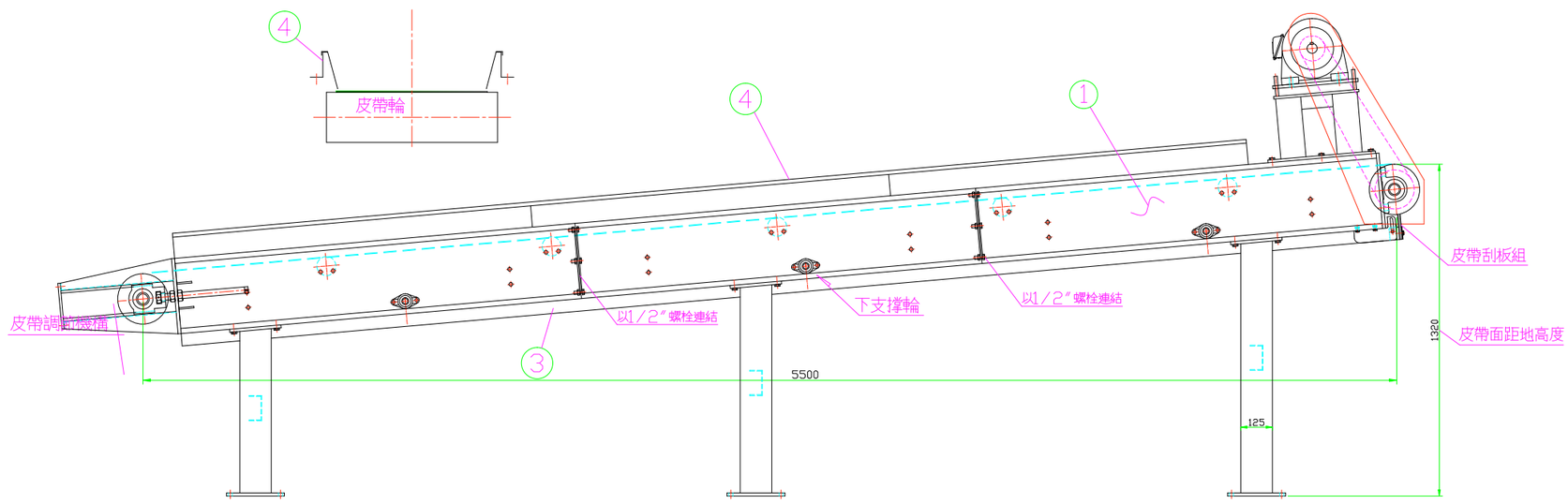
DESIGN DATA

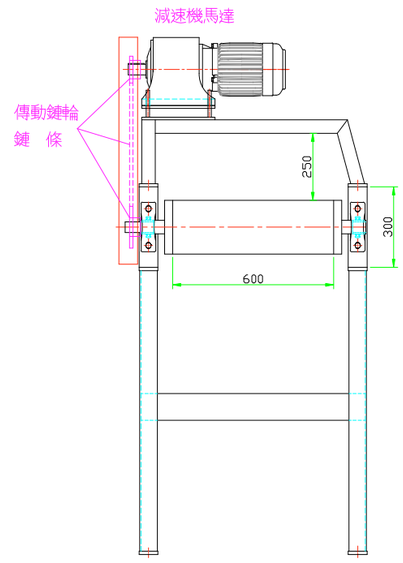
功　能	廚餘輸送
輸送量	5噸/小時
皮帶寬度	600mm
馬達功率	2HPX1具
減速機規格	齒輪式,減速比:1/60
皮帶輪直徑	φ200mm
皮帶輪軸承(前)	UCP-208
皮帶輪軸承(後)	UCT-208
上支撐輪組	φ76X550L
下支撐輪軸承	UCFL-204

MATERIAL LIST

NO.	DESCRIPTION	QTY	MATERIAL
1	機身	1	SUS304X3t
2	皮帶	1	PVCX3t/2層
3	水盤	1	SUS304X1.5t
4	側擋板	1	SUS304X1.5t

數量：2台





序次	修改說明	日期	修改	審核	核准
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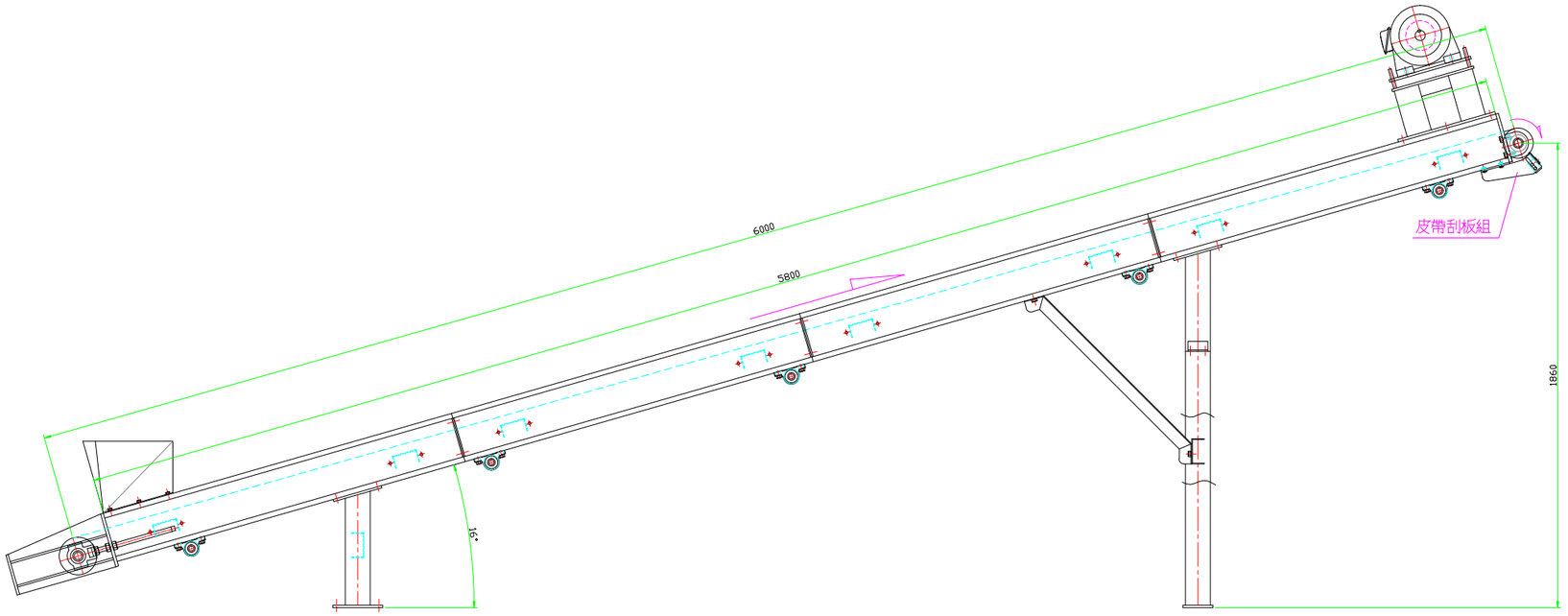
主辦機關	宜蘭縣政府環境保護局	承攬廠商	尚碟工業有限公司
審核	日期	繪圖 邱坤昇	日期 109.02.22
核准		核准 周憲政	比例 單位 mm

標案名稱	108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案	
圖名	撿拾平台輸送帶	
圖號	第 05 頁	版次



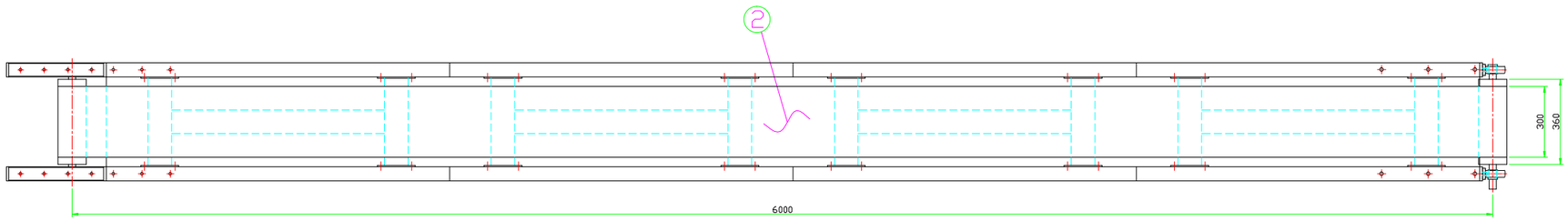
DESIGN DATA

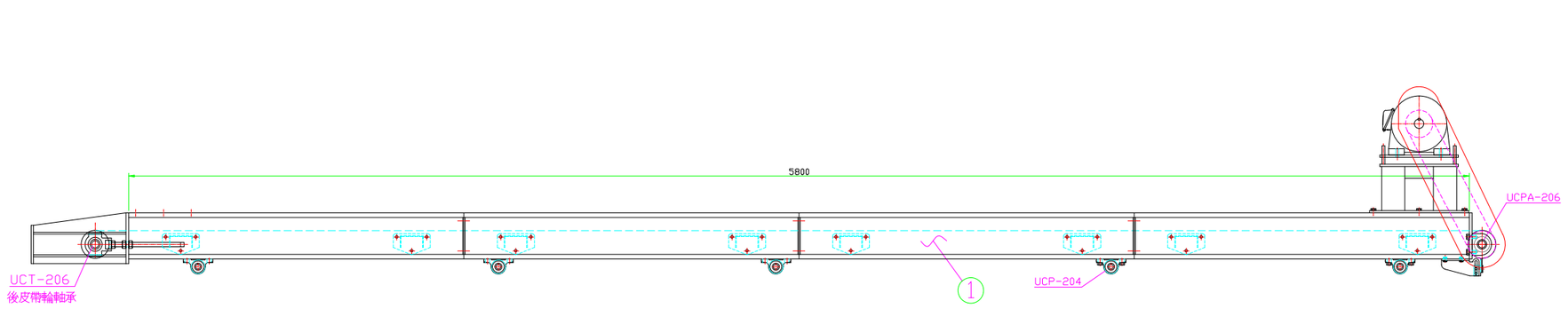
功　能	廚餘輸送
輸送量	2噸/小時
皮帶寬度	300mm
馬達功率	0.5HPX1具
減速機規格	齒輪式, 減速比1/60
皮帶輪直徑	ø120mm
皮帶輪軸承(前)	UCPA-206
皮帶輪軸承(後)	UCT-206
下支撐輪軸承	UCP-204

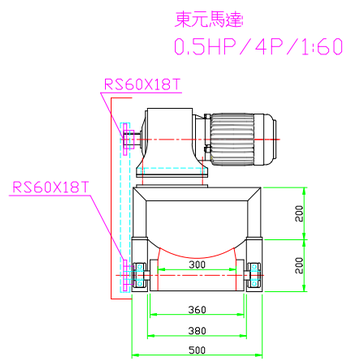
MATERIAL LIST

NO.	DESCRIPTION	QTY	MATERIAL
1	機　身	1	SUS304X3t
2	皮　帶	1	PVC

數量：2 台







序次	修改說明	日期	修改	審核	核准
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主辦機關	宜蘭縣政府環境保護局	承攬廠商	尚碟工業有限公司	標案名稱	108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案
審核		日期		繪圖 邱坤昇	日期 109.02.22	比例	圖名 300W一篩除物輸送帶
核准				核准 周憲政		單位 mm	圖號	第 06 頁	版次

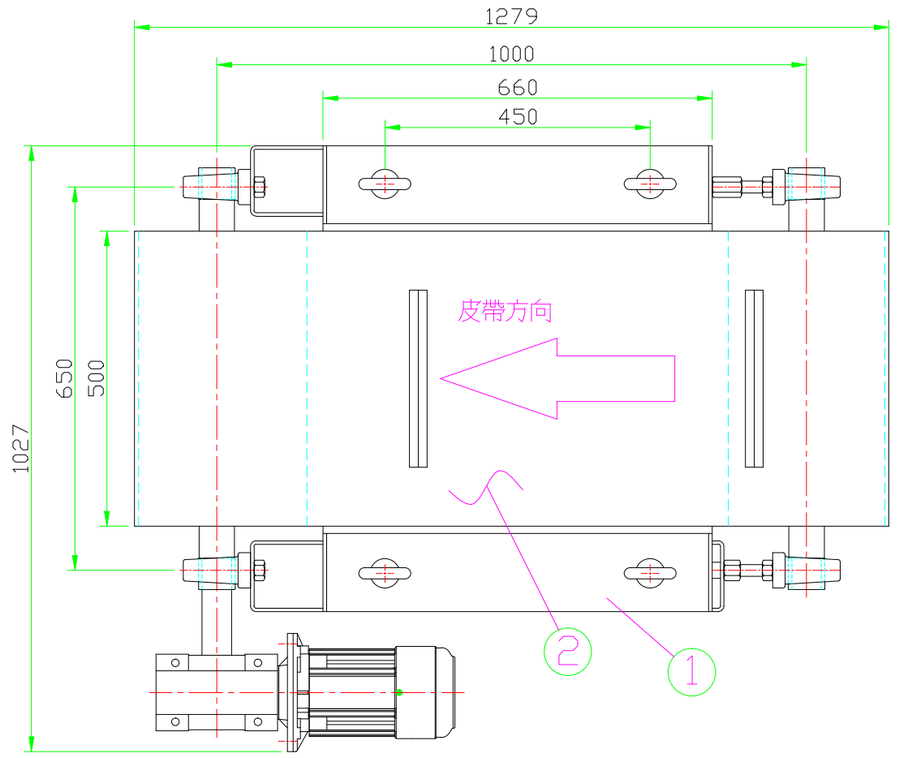
DESIGN DATA

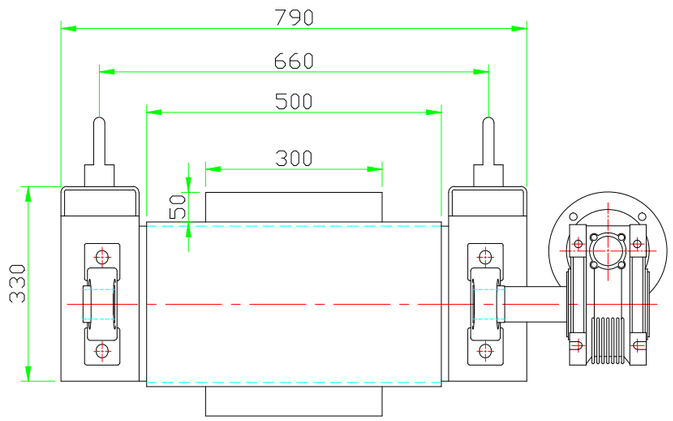
功　能	排除鐵金屬
最大磁力	3000高斯
皮帶速度	50m/min
皮帶寬度	500mm
皮帶輪軸承	UCP-210
馬達功率	2HPX1具
減速機規格	渦輪式, 減速比1/40
皮帶輪直徑	ø265mm

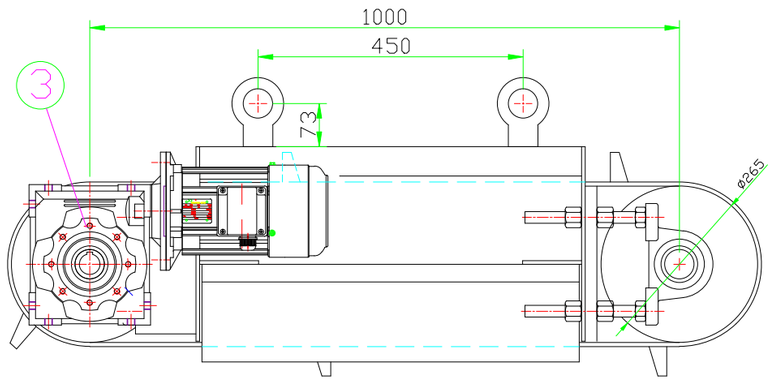
MATERIAL LIST

NO.	DESCRIPTION	Q'TY	MATERIAL
1	機　身	1	SS400
2	皮　帶	1	橡膠
3	減速機	1	鋁合金

數量：2 台







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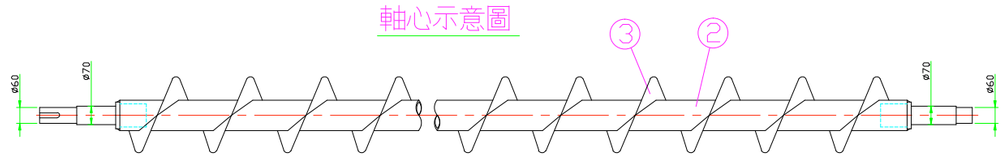
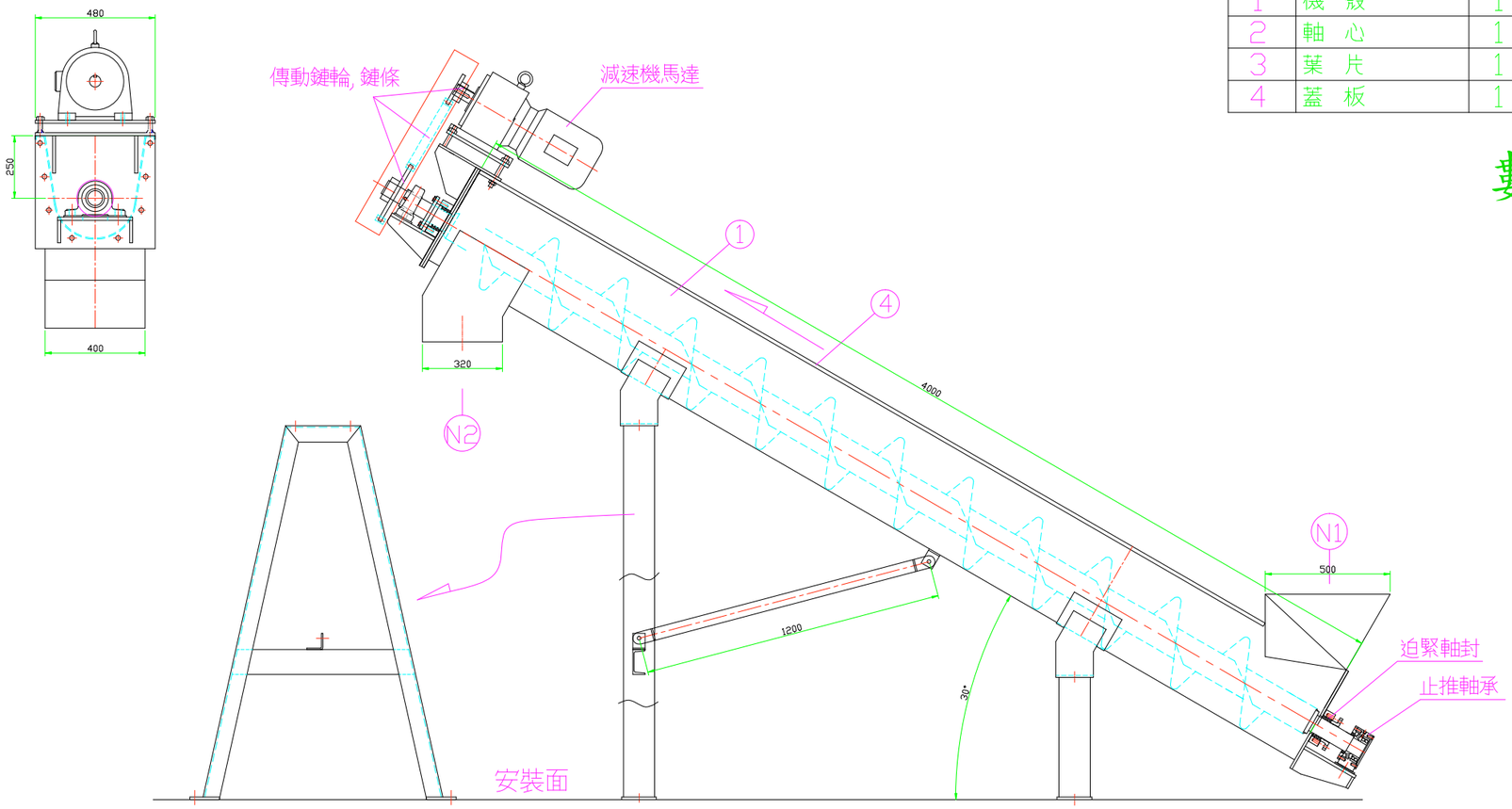
主辦機關	宜蘭縣政府環境保護局		
審核		日期	
核准			
承攬廠商	尚碟工業有限公司		
繪圖	邱坤昇	日期 109.02.22	比例
核准	周憲政		單位 mm
標案名稱	108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案		
圖名	600型－磁選機		
圖號	第 07 頁		版次

軸心示意圖





DESIGN DATA

功　能	廚餘輸送	馬達功率	3HPX1具
輸送量	5噸/小時	減速機規格	齒輪式, 減速比1/10
連座軸承(前)	UCP-212	鏈輪規格	RS80X15T,RS80X30T
止推軸承組	2212X1只 30212X1只	軸封規格	1/2"石墨迫緊軸封

NOZZLE LIST

NO.	DESCRIPTION	Q'TY	SIZE	MATARIAL
N1	廚餘入口	1	500X500	SUS304X4t
N2	廚餘出料口	1	400X320	SUS304X4t

MATERIAL LIST

NO.	DESCRIPTION	Q'TY	MATERIAL	REMARKS
1	機　殼	1	SUS304	U12",4t
2	軸　心	1	SS400	4",SCH80
3	葉　片	1	SUS304	5t
4	蓋　板	1	SUS304	1.2t

數量：2 台

序次	修改說明	日期	修改	審核	核准
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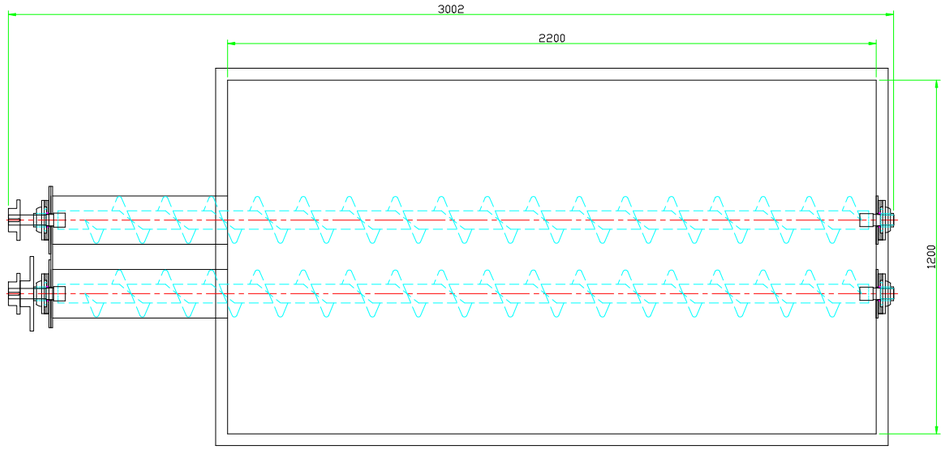
主辦機關	宜蘭縣政府環境保護局		
審核		日期	
核准			

承攬廠商	尚碟工業有限公司		
繪圖 邱坤昇	日期 109.02.22	比例	
核准 周憲政		單位 mm	

標案名稱	108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案	
圖名	U-12吋螺運機	
圖號	第 08 頁	版次



DESIGN DATA

功 能	副資材儲存/輸出	馬達功率	2HP/4P
設計容量	2.5立方米	減速機規格	齒輪式:1/60
前/後軸承	UCFC-207	軸 封	TC40X50X7
傳動鏈輪	RS60X14T-RS60X40T / RS60X21T-RS60X21T		

NOZZLE LIST

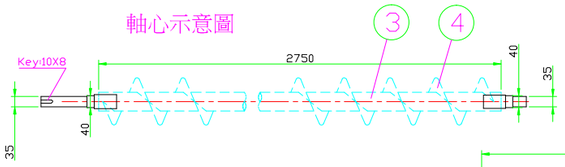
NO.	DESCRIPTION	QTY	SIZE	FLANG RATING
N1	入料口	1	2200X1200	
N2	出料口	2	215X200	

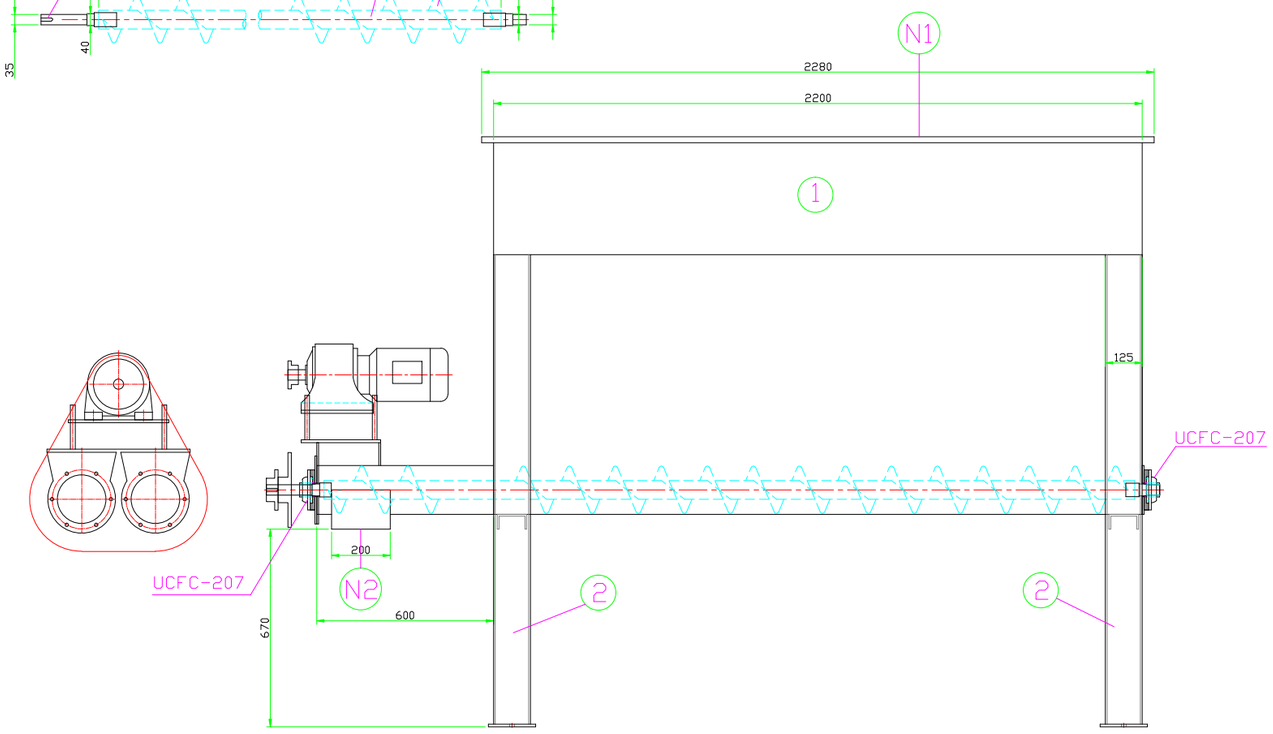
MATERIAL LIST

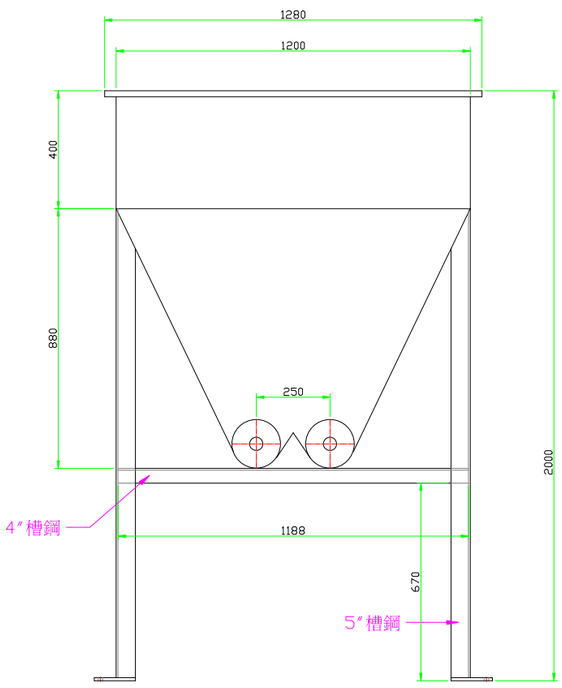
NO.	DESCRIPTION	QTY	MATERIAL	REMARKS
1	桶 身	1	SS400	3t
2	支撐座	1	SS400	5吋/4吋槽鋼
3	軸 心	2	SS400	ø1.5吋/Sch80
4	螺旋葉片	2	SS400	3t

數量 ： 1台

軸心示意圖







序次	修改說明	日期	修改	審核	核准
1					
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5					

主辦機關：宜蘭縣政府環境保護局　審核　日期　核准

承攬廠商：尚碟工業有限公司　繪圖：邱坤昇　日期：109.02.22　比例　核准：周憲政　單位：mm

標案名稱：108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案

圖名：副資材暫存槽

圖號　第 09 頁　版次

DESIGN DATA

功 能	廚餘破碎	馬達功率	20HP/4PX1具
處理量	5噸/小時	減速機	THH620/1:59
主動皮帶輪	φ200/5B	傳動方式	皮帶傳動
被動皮帶輪	φ200/5B	被動齒輪	M6X45T
聯軸器	#12018		
主動齒輪	M6X37T		

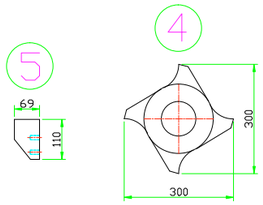
NOZZLE LIST

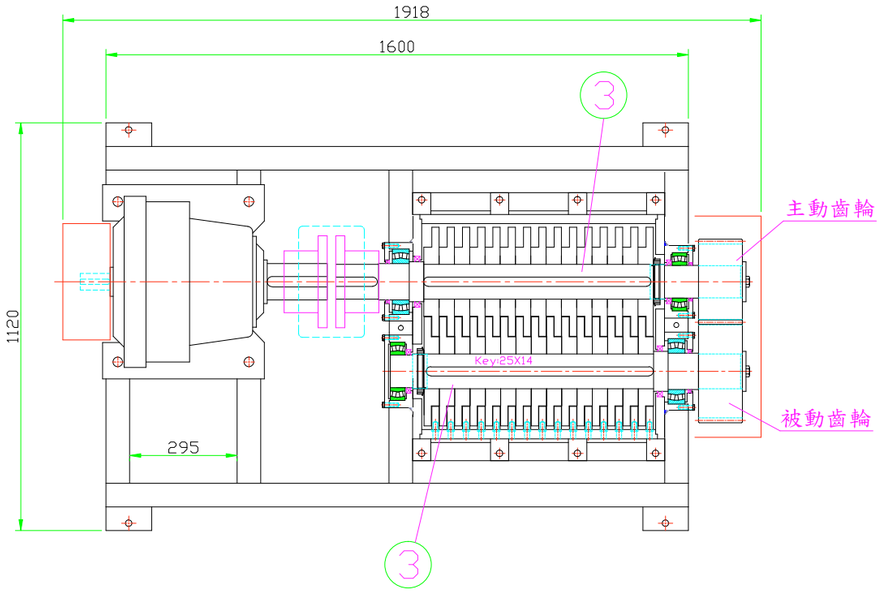
NO.	DESCRIPTION	QTY	SIZE	REMARKS
N1	進料口	1	700X650	SUS304X6t
N2	出料口	1	520X450	SUS304X6t

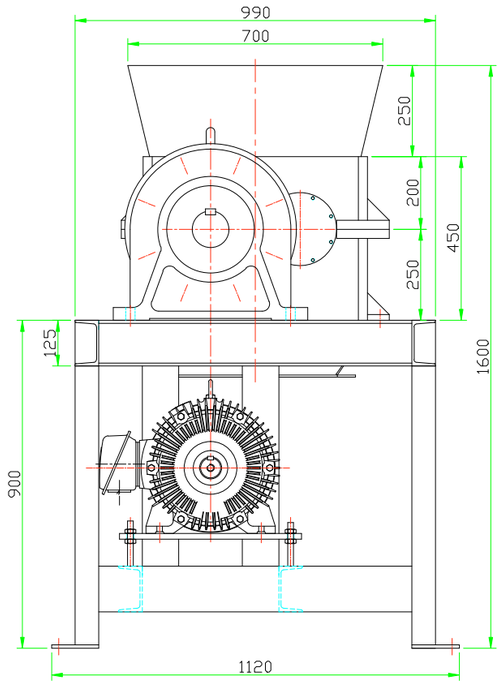
MATERIAL LIST

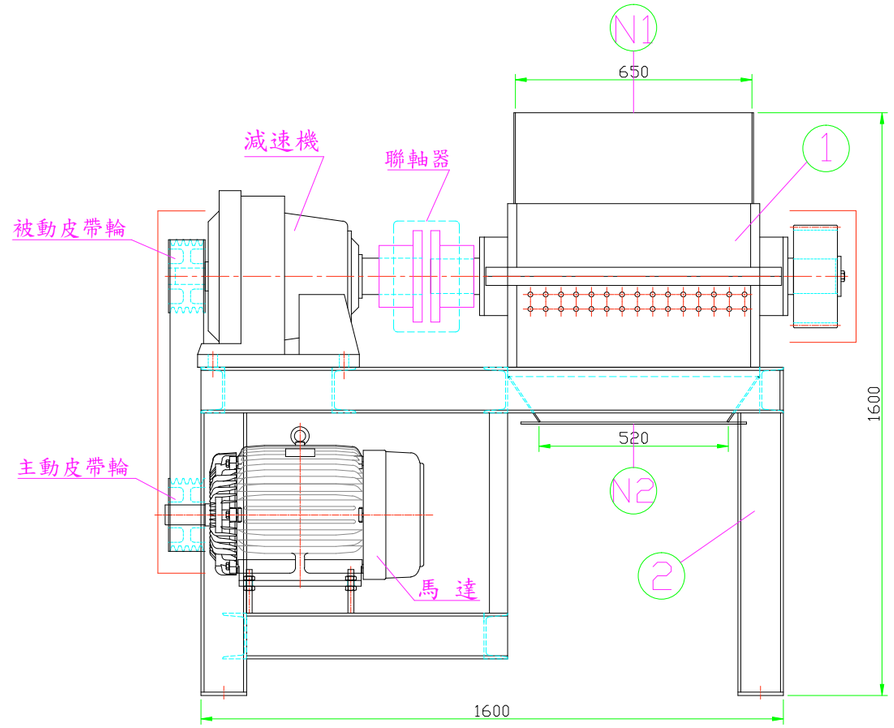
NO.	DESCRIPTION	QTY	MATERIAL	REMARKS
1	本 體	1	SS400	19t
2	腳架	1	SS400	5吋槽鋼
3	主軸心	2	SS400	φ95X1110L
4	4爪細碎刀	30	SS400	20t
5	固定刀	30	SS400	20t

數量：2 台









序次	修改說明	日期	修改	審核	核准
△1					
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主辦機關	宜蘭縣政府環境保護局				
審核		日期			
核准					
承攬廠商	尚碟工業有限公司				
繪圖	邱坤昇	日期	109.02.22	比例	
核准	周憲政			單位	mm
標案名稱	108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案				
圖名	300型－雙軸細碎機				
圖號		第 10 頁		版次	

DESIGN DATA

功　能	廚餘輸送	馬達功率	2HPX1具
輸送量	5噸/小時	減速機規格	齒輪式, 減速比1/10
連座軸承(前)	UCP-208	軸封規格	3/8"石墨迫緊軸封
止推軸承組	2208X1只 30208X1只	鏈輪規格	RS60X15T RS60X30T

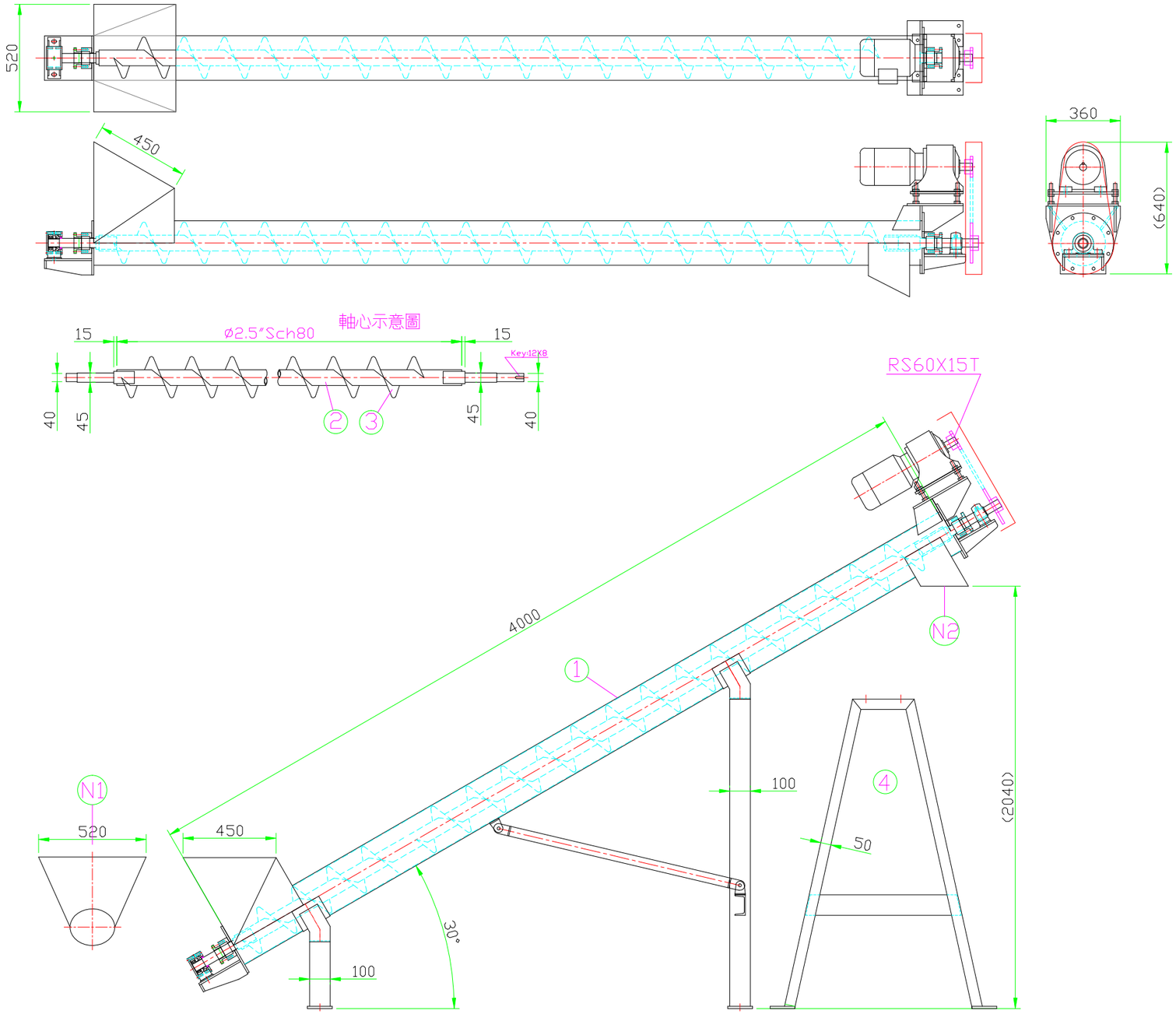
NOZZLE LIST

NO.	DESCRIPTION	QTY	SIZE	MATARIAL
N1	廚餘入口	1	520X450	SUS304X3t
N2	廚餘出料口	1	250X230	SUS304X3t

MATERIAL LIST

NO.	DESCRIPTION	QTY	MATERIAL	REMARKS
1	機　殼	1	SUS304	ø8",4t
2	軸　心	1	SS400	ø2.5",SCH80
3	葉　片	1	SUS304	4t
4	支撐座	1	SS400	4吋槽鋼

數量：2台



序次	修改說明	日期	修改	審核	核准
1					
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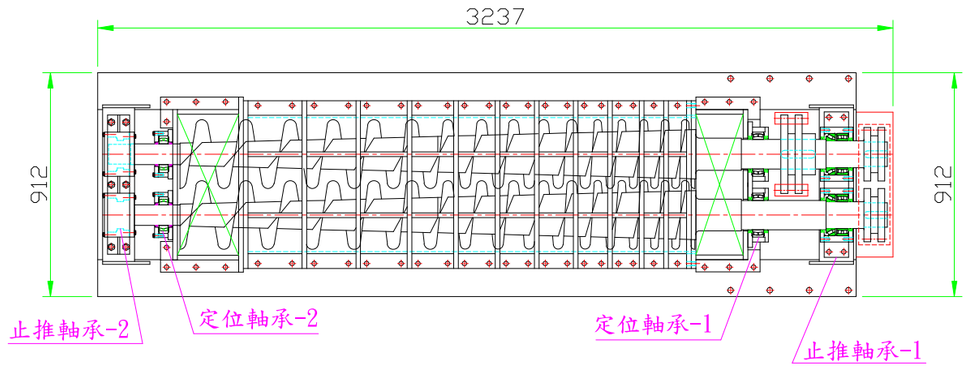
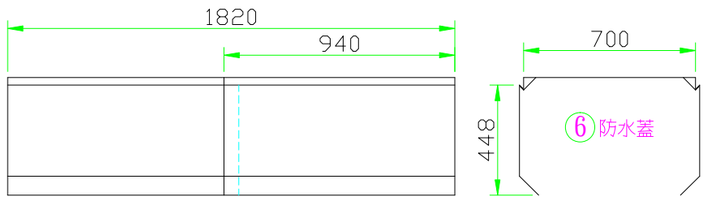
主辦機關	宜蘭縣政府環境保護局			承攬廠商	尚碟工業有限公司
審核		日期		繪圖 邱坤昇	日期 109.02.22
核准				核准 周憲政	單位 mm

標案名稱	108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案		
圖名	0－8吋螺運機		
圖號	第 11 頁		版次





DESIGN DATA

功 能	廚餘脫水	馬達功率	20HP/6PX1具
處理量	5噸/小時	減速機	THH619/1:43
皮帶輪	3B	傳動方式	皮帶-鏈條傳動
主傳動鏈輪	RS160雙排	定位軸承-1	φ120
次傳動鏈輪	RS160雙排	定位軸承-2	φ85
止推軸承-1	φ110	止推軸承-2	φ80

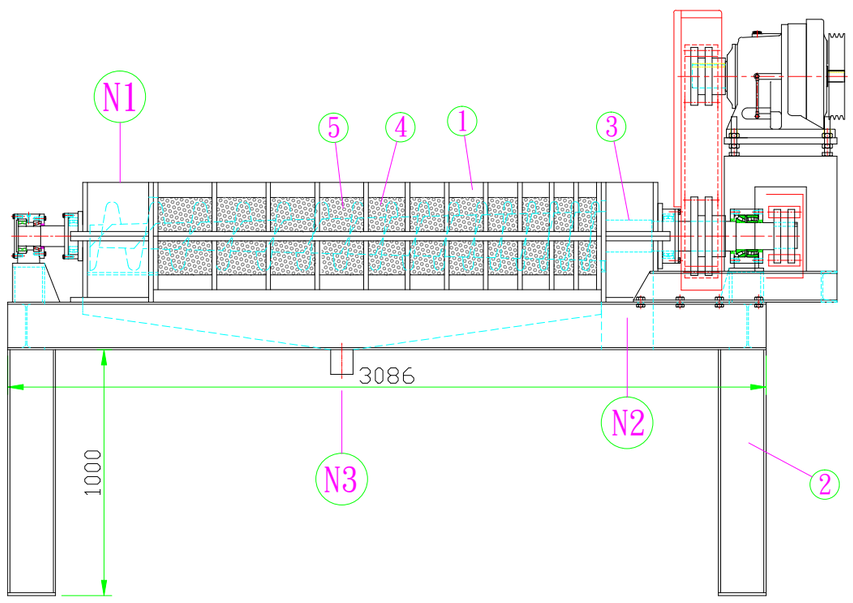
NOZZLE LIST

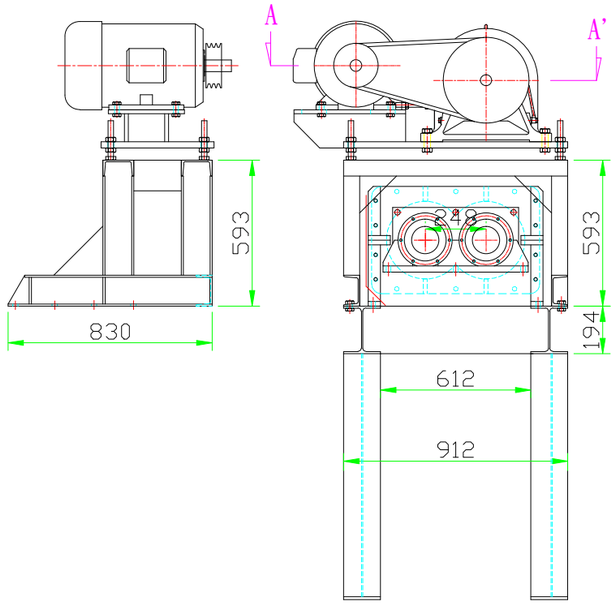
NO.	DESCRIPTION	Q'TY	SIZE	REMARKS
N1	進料口	1	570X250	
N2	出料口	1	570X190	
N3	排水口	1	φ3"	

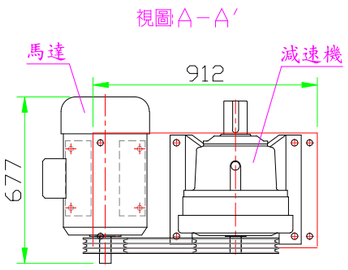
MATERIAL LIST

NO.	DESCRIPTION	Q'TY	MATERIAL	REMARKS
1	本 體	1	SS400	19t
2	腳架	1	SS400	H200X150
3	主軸心	2	SCM400	φ280X3170L
4	網框	2	SS400	9t
5	濾網	2	SUS304	3t
6	防水蓋	1	SUS304	1.5t

數量：2 台







序次	修改說明	日期	修改	審核	核准
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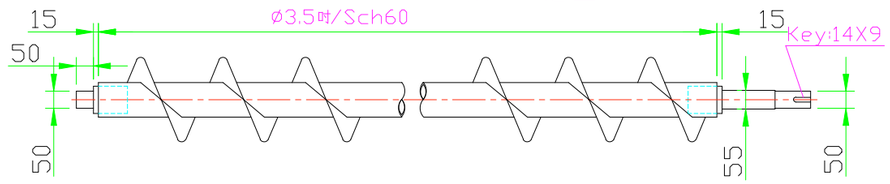
主辦機關	宜蘭縣政府環境保護局	承攬廠商	尚碟工業有限公司	標案名稱	108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案
審核		日期		繪圖 邱坤昇	日期 109.02.22	比例	圖名 280型－固液分離機
核准				核准 周憲政		單位 mm	圖號	第 12 頁	版次

軸心示意圖



DESIGN DATA

功　能	廚餘輸送	馬達功率	2HPX1具
輸送量	8噸/小時	減速機規格	齒輪式, 減速比1/10
自潤軸承(前)	SPF-5050	軸封規格	3/8"石墨迫緊軸封
止推軸承組	2210X1只/每組 30210X1只/每組	傳動鏈輪	主動RS60X15T 被動RS60X30T

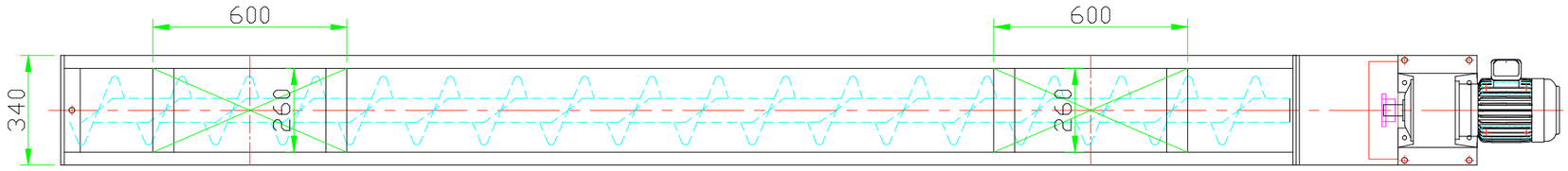
NOZZLE LIST

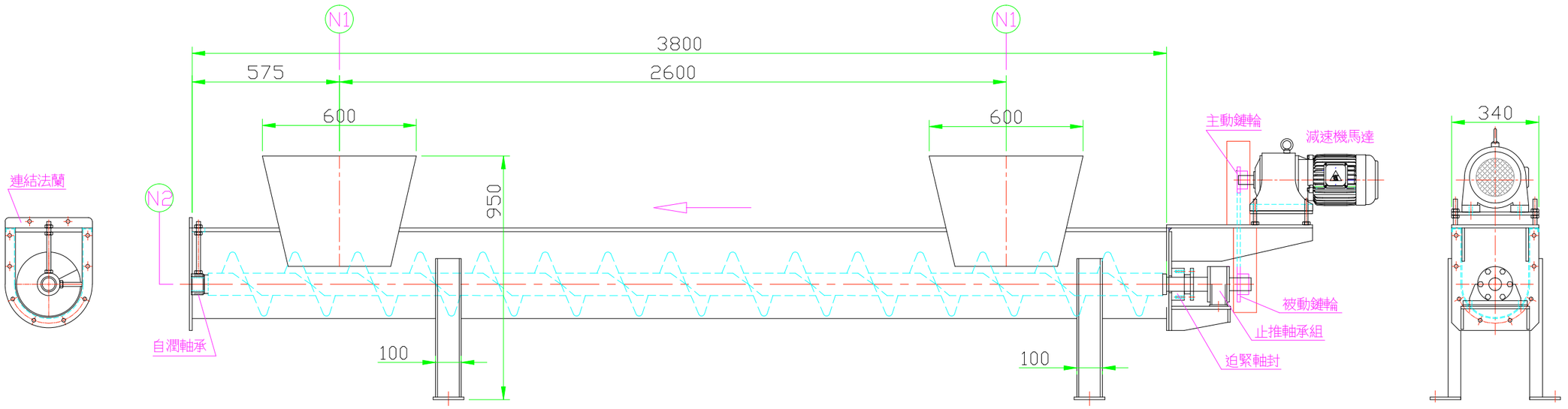
NO.	DESCRIPTION	QTY	SIZE	MATARIAL
N1	廚餘入口	2	600X260	SUS304X3t
N2	廚餘出料口	1	約ø300	SUS304X3t

MATERIAL LIST

NO.	DESCRIPTION	QTY	MATERIAL	REMARKS
1	機　殼	1	SUS304	U10",4t
2	軸　心	1	SS400	ø3.5",SCH80
3	葉　片	1	SUS304	5t
4	支撐座	2	SS400	4吋槽鋼

數量：1 台





序次	修改說明	日期	修改	審核	核准
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主辦機關	宜蘭縣政府環境保護局		
審核		日期	
核准			

承攬廠商	尚碟工業有限公司		
繪圖	邱坤昇	日期 109.02.22	比例
核准	周憲政		單位 mm

標案名稱	108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案	
圖名	U-10吋螺運機-水平	
圖號	第 13 頁	版次

DESIGN DATA

功　能	副資材輸送	馬達功率	2HPX1具
輸送量	2噸/小時	減速機規格	齒輪式,減速比1/10
連座軸承(前)	UCFC-207	軸封規格	3/8"石墨迫緊軸封
止推軸承組	2208X1只 30208X1只	鏈輪規格	主動RS60X15T 被動RS60X30T

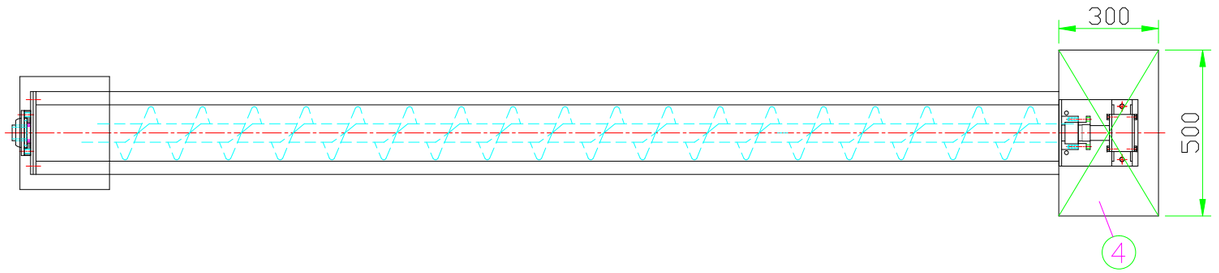
NOZZLE LIST

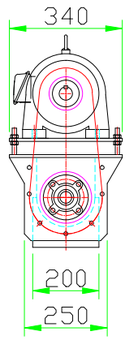
NO.	DESCRIPTION	QTY	SIZE	MATARIAL
N1	入料口	1	500X300	SUS304X4t
N2	出料口	1	200X200	SUS304X3t

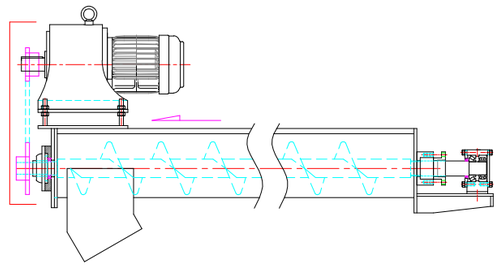
MATERIAL LIST

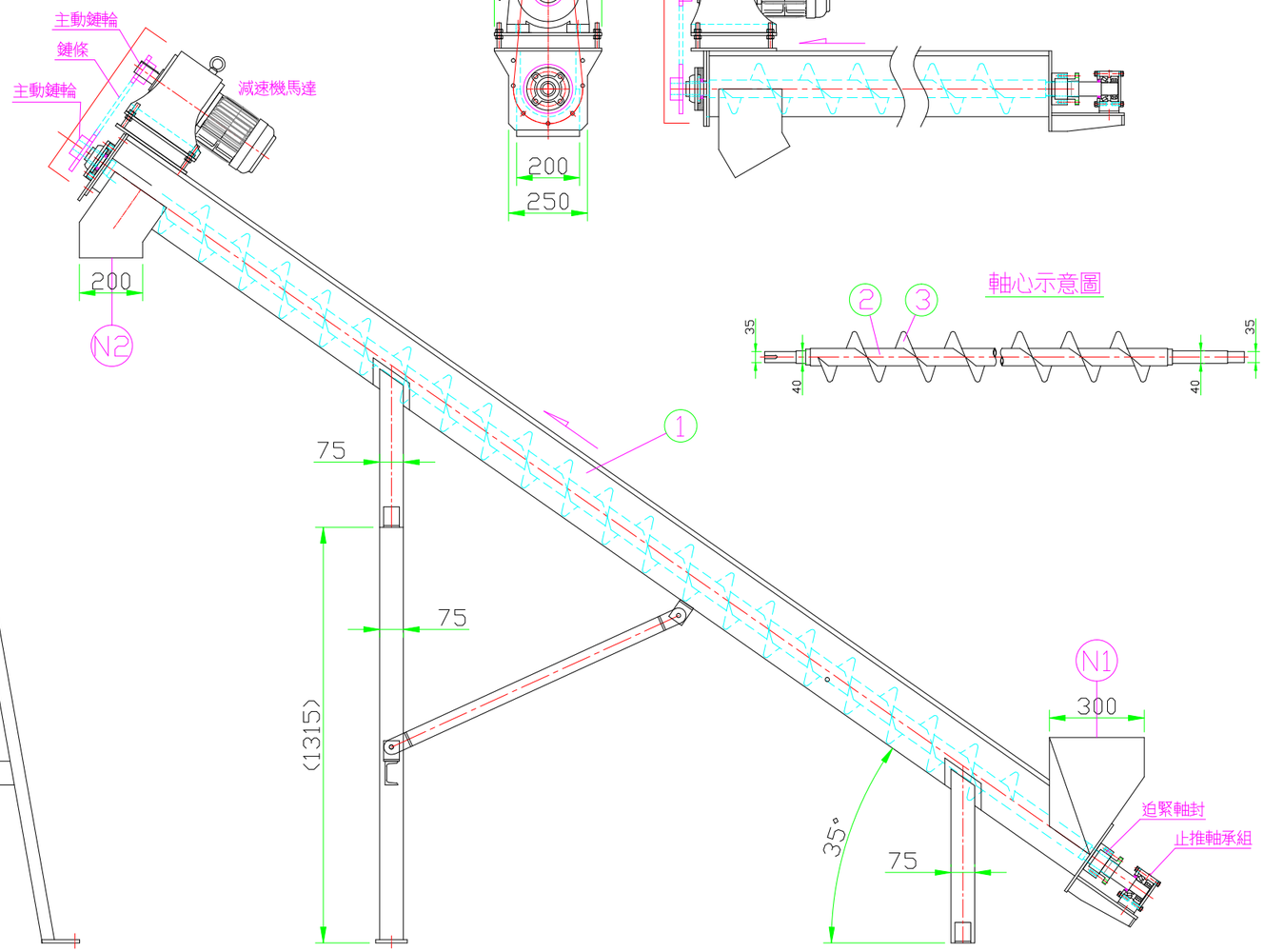
NO.	DESCRIPTION	QTY	MATERIAL	REMARKS
1	機　殼	1	SUS304X3t	U6"X3800L
2	軸　心	1	SS400	1-1/2",SCH80
3	葉　片	1	SUS304	3t
4	進料漏斗	1	SUS304	3t
5	支撐座	1	SS400	3吋槽鋼

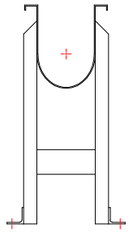
數量：1台

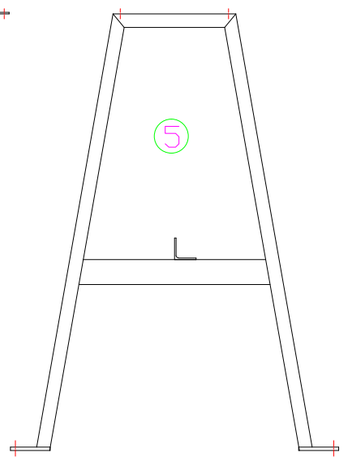












序次	修改說明	日期	修改	審核	核准
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主辦機關	宜蘭縣政府環境保護局				
審核		日期			
核准					
承攬廠商	尚碟工業有限公司				
繪圖	邱坤昇	日期	109.02.22	比例	
核准	周憲政			單位	mm
標案名稱	108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案				
圖名	U-6吋副資材螺運機-1				
圖號		第 14 頁		版次	

DESIGN DATA

功　能	副資材輸送	馬達功率	2HPX1具
輸送量	2噸/小時	減速機規格	齒輪式, 減速比1/10
連座軸承(前)	UCFC-207	軸封規格	3/8"石墨迫緊軸封
止推軸承組	2208X1只 30208X1只	鏈輪規格	主動RS60X15T 被動RS60X30T

NOZZLE LIST

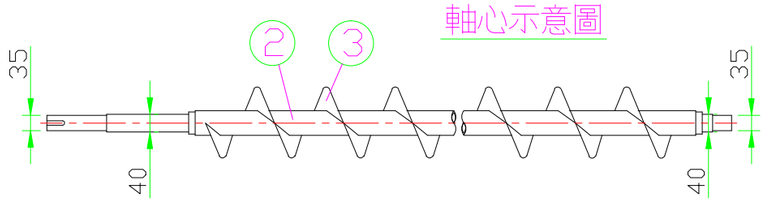
NO.	DESCRIPTION	Q'TY	SIZE	MATARIAL
N1	入料口	1	250X250	SUS304X3t
N2	出料口	2	200X200	SUS304X3t

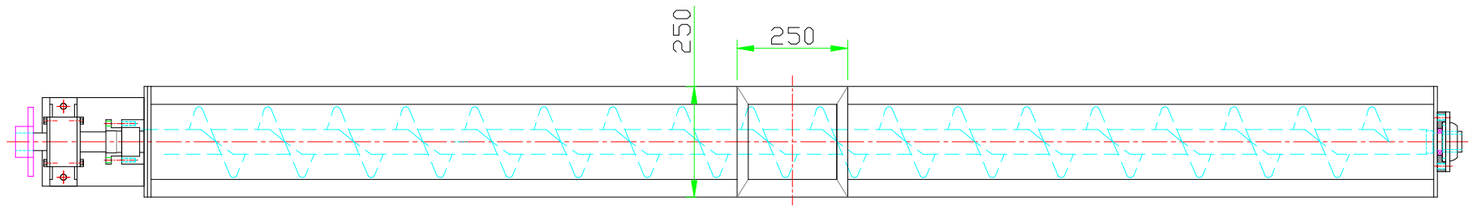
MATERIAL LIST

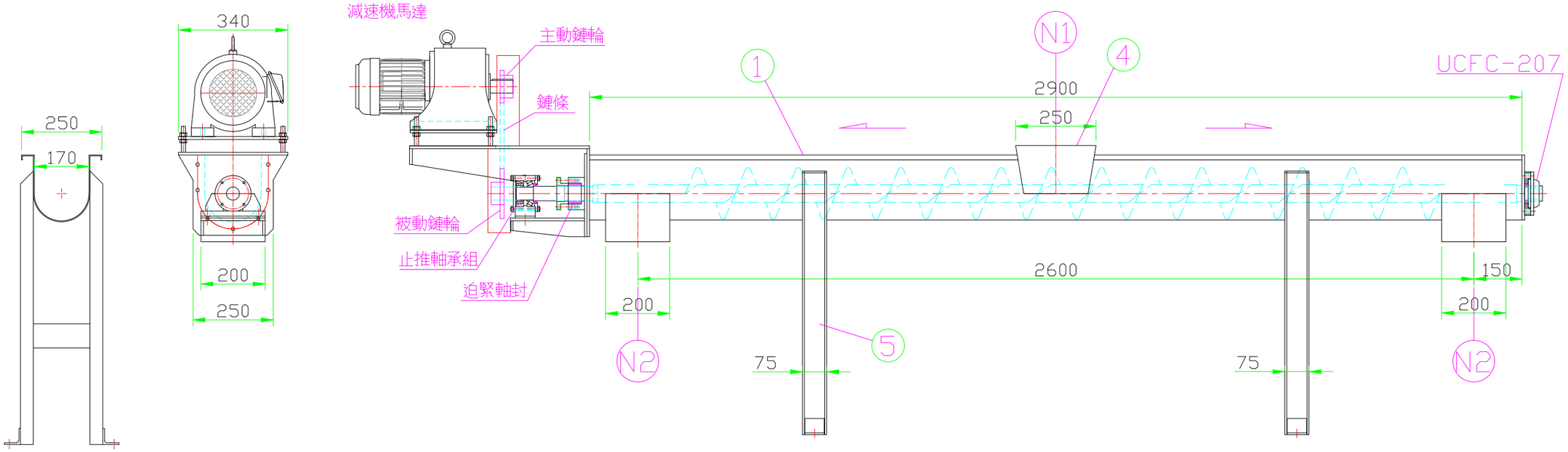
NO.	DESCRIPTION	Q'TY	MATERIAL	REMARKS
1	機　殼	1	SUS304X3t	U6"X2900L
2	軸　心	1	SS400	1-1/2",SCH80
3	葉　片	1	SUS304	3t
4	進料漏斗	1	SUS304	3t
5	支撐座	2	SS400	3吋槽鋼

數量：1台

軸心示意圖







序次	修改說明	日期	修改	審核	核准
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4					
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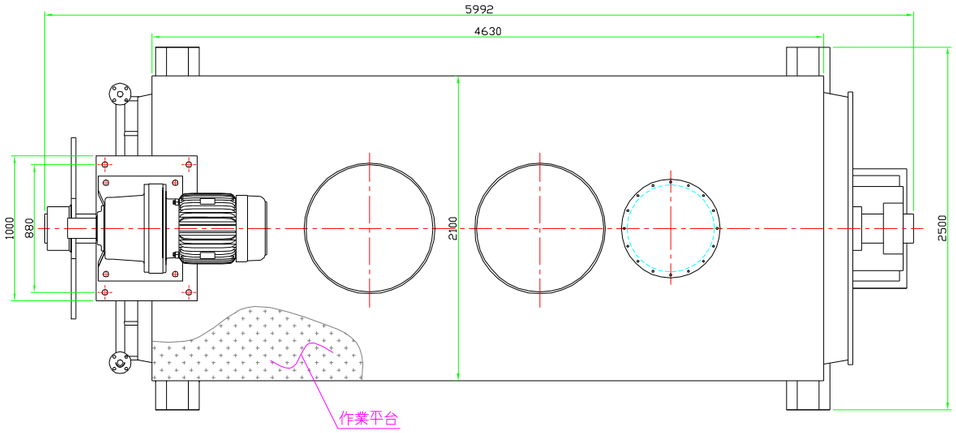
主辦機關	宜蘭縣政府環境保護局		
審核		日期	
核准			
承攬廠商	尚碟工業有限公司		
繪圖	邱坤昇	日期	109.02.22
核准	周憲政		
比例		單位	mm
標案名稱	108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案		
圖名	U-6吋副資材螺運機-2		
圖號	第 15 頁	版次	



DESIGN DATA

功　能	廚餘輸送	馬達功率	20HP/6PX1具
處理量	10噸/批次	減速機規格	THHM624-1:87
設計溫度	120°C		
傳動鏈輪	主動RS200X15T 被動RS200X60T		

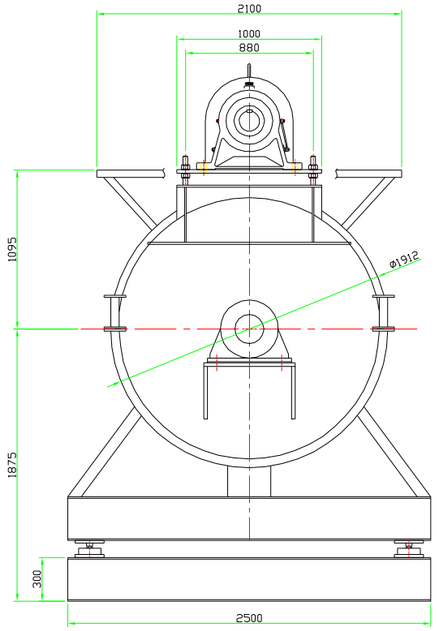
NOZZLE LIST

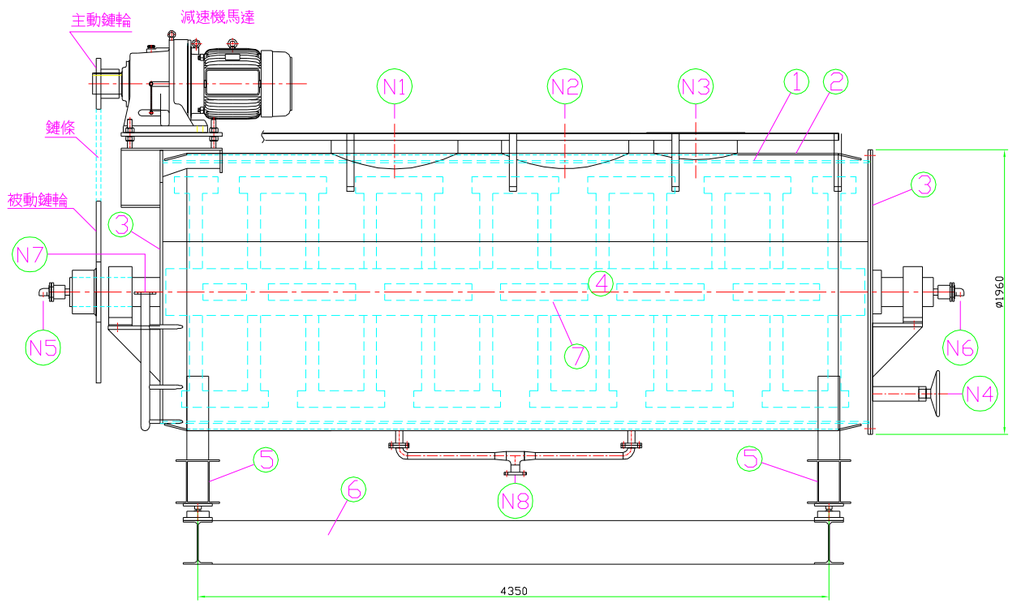
NO.	DESCRIPTION	QTY	SIZE	REMARKS
N1	進料口	1	ø900	SS400
N2	維修口	1	ø900	SS400
N3	廢氣抽氣口	1	ø600	SS400
N4	出料口	1	約ø248	SS400
N5	軸心熱水入口	1	ø1-1/2"	FLG10K/SS400
N6	軸心熱水入口	1	ø1-1/2"	FLG10K/SS400
N7	桶身夾層熱水入口	1	ø2"	FLG10K/SS400
N8	桶身夾層熱水出口	1	ø2"	FLG10K/SS400

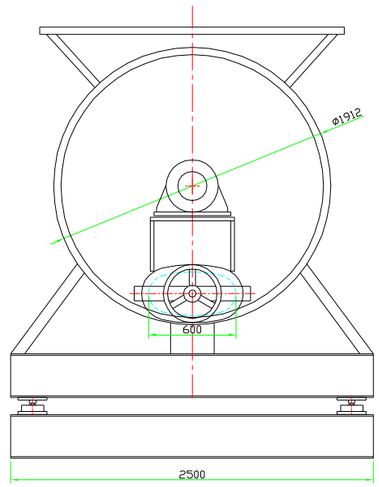
MATERIAL LIST

NO.	DESCRIPTION	QTY	MATERIAL	REMARKS
1	桶身內層	1	SS400	16t
2	桶身外層	1	SS400	10t
3	前後端蓋	2	SS400	16t
4	主軸心	1	SS400	12吋鋼管　H40
5	支撐座	2	SS400	H300X150X10
6	底　座	1	SS400	H300X200
7	攪拌器	1	SS400	4吋/3吋鋼管

數量：1台







序次	修改說明	日期	修改	審核	核准
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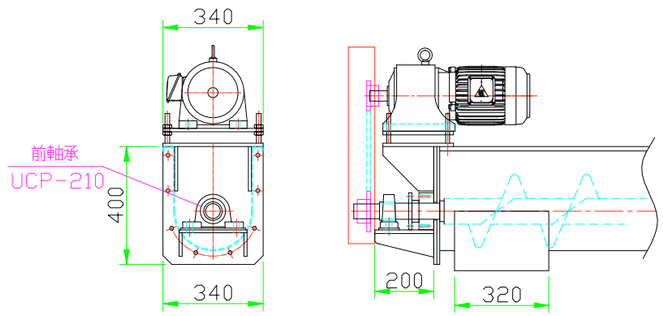
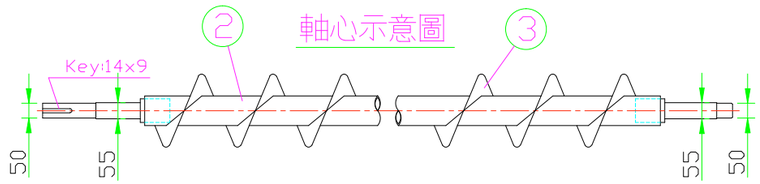
主辦機關	宜蘭縣政府環境保護局				
審核		日期			
核准					
承攬廠商	尚碟工業有限公司				
繪圖	邱坤昇	日期	109.02.22	比例	
核准	周憲政			單位	mm
標案名稱	108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案				
圖名	加熱滅菌脫水機				
圖號	第 16 頁			版次	





DESIGN DATA

功　能	廚餘輸送	馬達功率	2HPX1具
輸送量	8噸/小時	減速機規格	齒輪式,減速比1/10
前軸承	UCP-210	軸封規格	3/8″石墨迫緊軸封
止推軸承組	2210X1只/每組 30210X1只/每組	傳動鏈輪	主動RS60X15T 被動RS60X30T

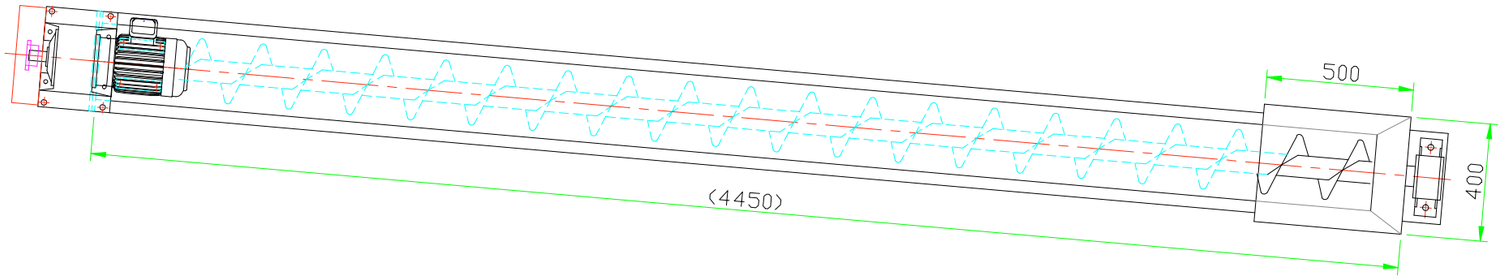
NOZZLE LIST

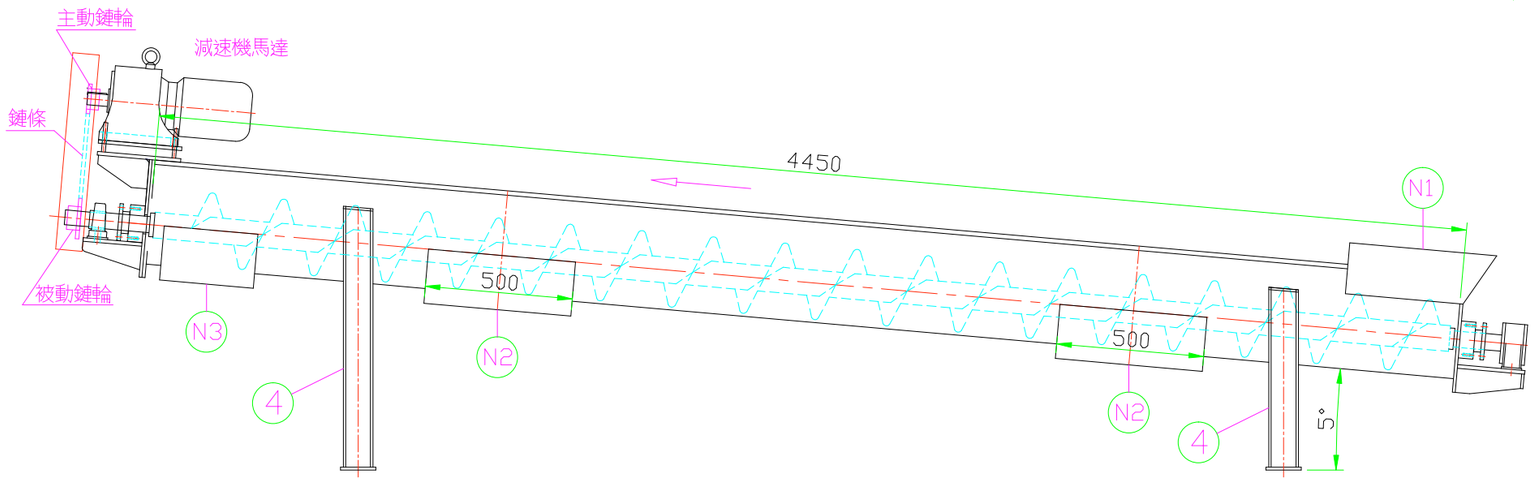
NO.	DESCRIPTION	Q'TY	SIZE	MATARIAL
N1	廚餘入口	2	500X400	SUS304X3t
N2	廚餘出料口	2	500X320	SUS304X3t
N3	廚餘出料口	1	320X320	SUS304X3t

MATERIAL LIST

NO.	DESCRIPTION	Q'TY	MATERIAL	REMARKS
1	機　殼	1	SUS304X4t	U10″X4450L
2	軸　心	1	SS400	ø3.5″,SCH80
3	葉　片	1	SUS304X5t	
4	支撐座	2	SS400	4吋槽鋼

數量：1台





序次	修改說明	日期	修改	審核	核准
1					
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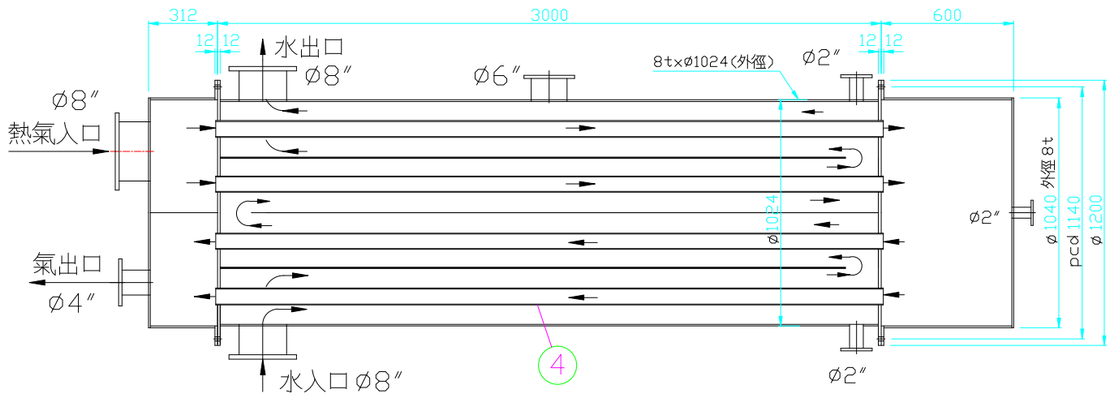
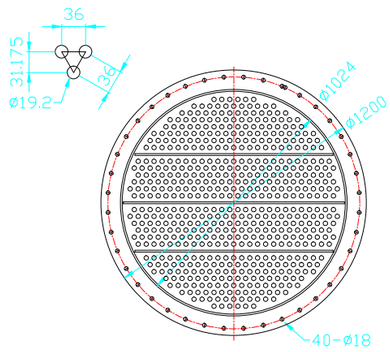
主辦機關：宜蘭縣政府環境保護局
審核　　日期
核准

承攬廠商：尚碟工業有限公司
繪圖 邱坤昇　日期 109.02.22　比例
核准 周憲政　單位 mm

標案名稱：108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案
圖名：U-10吋出料螺運機
圖號　第 17 頁　版次





DESIGN DATA

功　能	流體熱交換
熱交換面積	100平方米
廢氣流量	15CMM
循環水流量	1950L/min

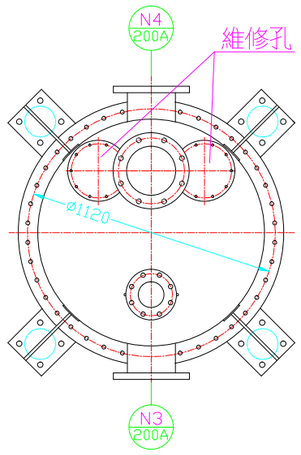
NOZZLE LIST

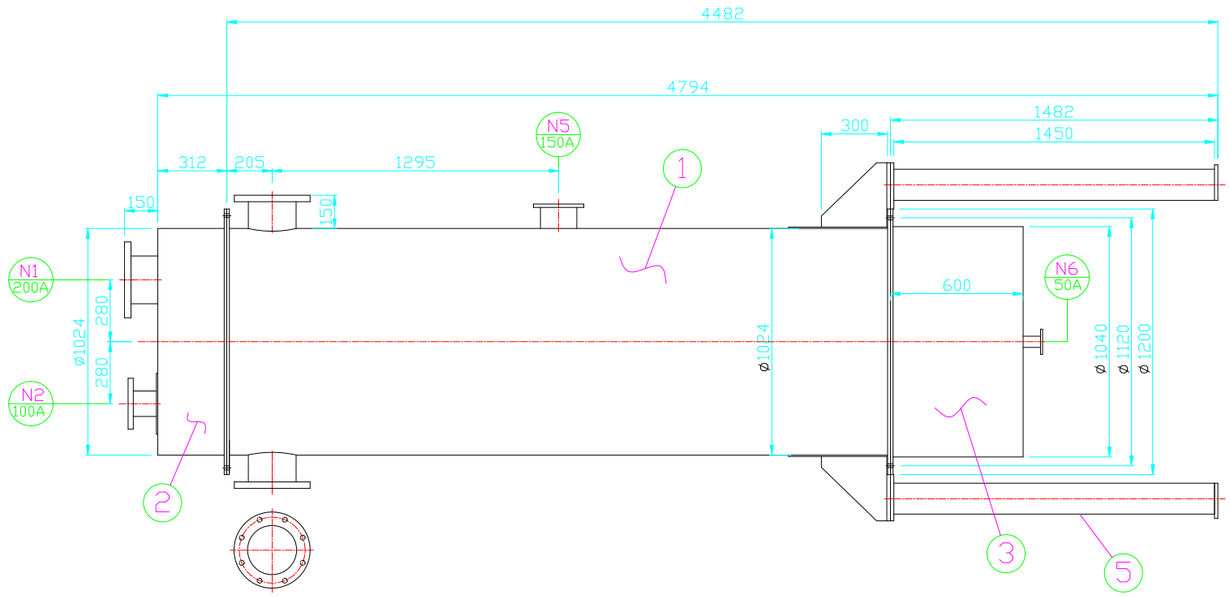
NO.	DESCRIPTION	QTY	SIZE	FLANG RATING	MATARIAL
N1	廢氣入口	1	200A	150LB	
N2	廢氣出口	1	100A	150LB	
N3	冷卻水入口	1	200A	150LB	
N4	冷卻水出口	1	200A	150LB	
N5	視窗	1	150A	150LB	
N6	排水口	1	50A	150LB	

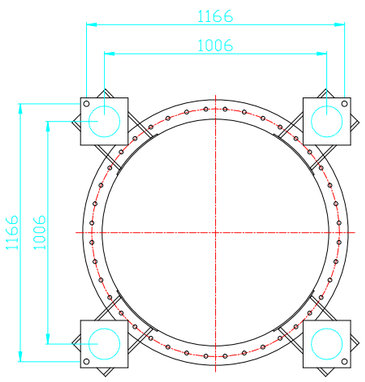
MATERIAL LIST

NO.	DESCRIPTION	QTY	MATERIAL	REMARKS
1	桶身	1	SS400	8t
2	上蓋	1	SUS304	3t
3	底蓋	1	SUS304	3t
4	熱交換管	560	SUS304	1.9t
5	腳架	4	SS41(方管100X100)	6t

數量：1 台







序次	修改說明	日期	修改	審核	核准
△1					
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△					
△					

主辦機關	宜蘭縣政府環境保護局	承攬廠商	尚碟工業有限公司
審核		日期	
繪圖	邱坤昇	日期	109.02.22
核准			
核准	周憲政	單位	mm

標案名稱	108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案
圖名	冷　凝　器
圖號	第 18 頁
版次	

DESIGN DATA

功能	廢氣化學洗滌	風車功率	2HP
設計流量	30CMM	循環泵功率	2HP

NOZZLE LIST

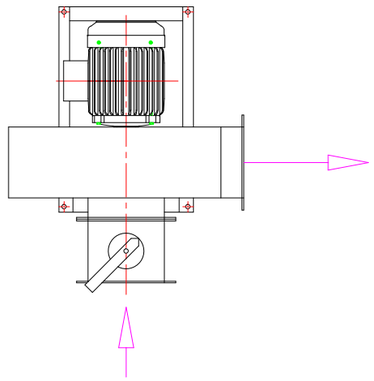
NO.	DESCRIPTION	QTY	SIZE	FLANG RATING	MATARIAL
N1	廢氣入口	1	8″	10K	
N2	廢氣出口	1	12″	10K	
N3	維修口	5	12″	10K	

MATERIAL LIST

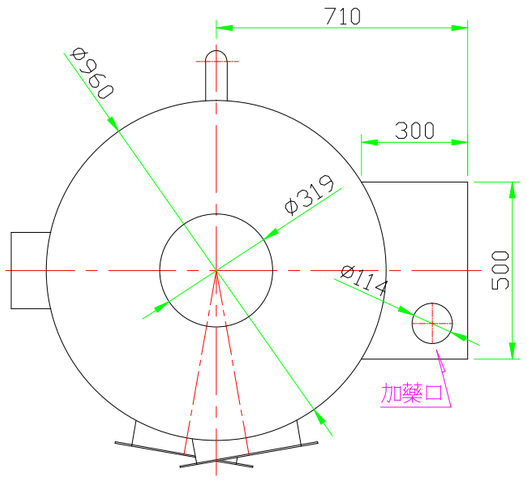
NO.	DESCRIPTION	QTY	MATERIAL	REMARKS
1	桶身	1	SUS304	4t
2	洗滌液管路	1	SUS304	口徑2″
3	擴張網	3	SUS304	3t

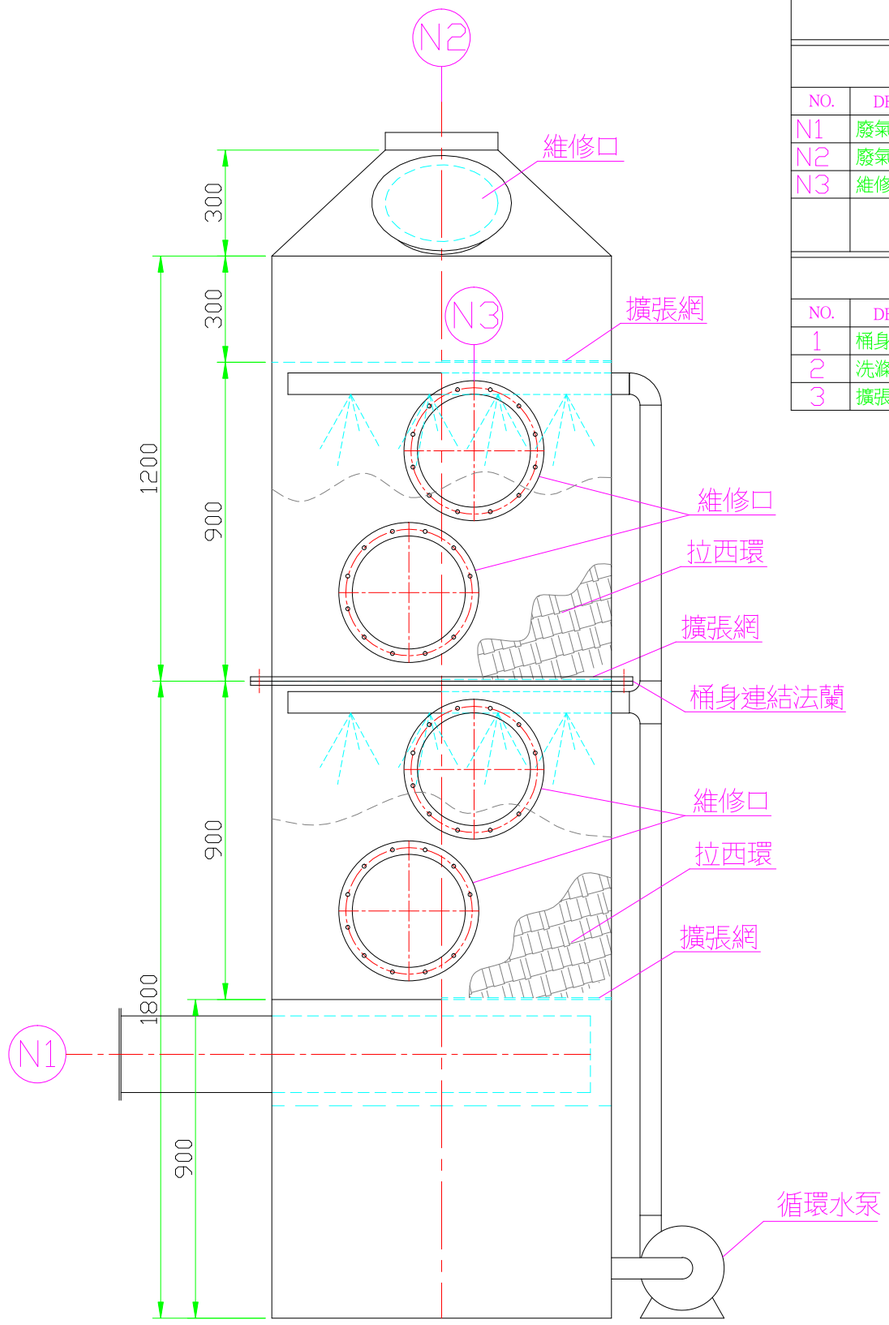
數量：2 台

風車示意圖

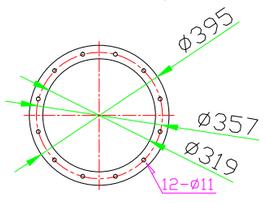


上視圖





FLG12″
維修孔法蘭



序次	修改說明	日期	修改	審核	核准
△1					
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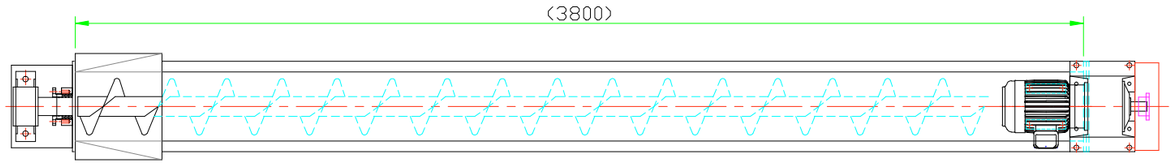
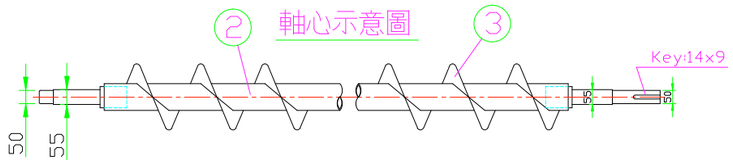
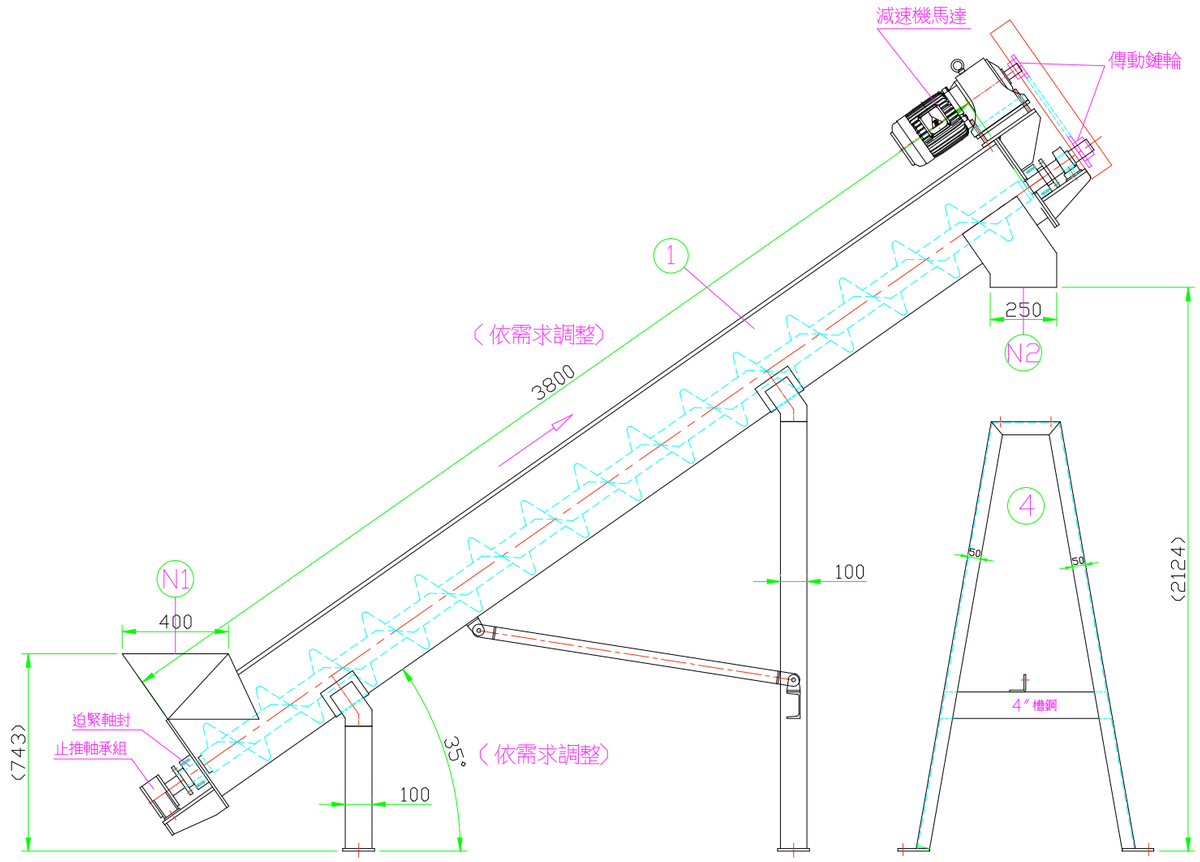
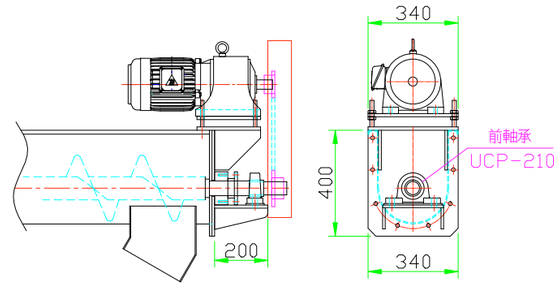
主辦機關	宜蘭縣政府環境保護局	承攬廠商	尚碟工業有限公司
審核	日期	繪圖 邱坤昇	日期 109.02.22
核准		核准 周憲政	比例 / 單位 mm

標案名稱	108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案
圖名	洗 滌 塔
圖號	第 19 頁
版次	









DESIGN DATA

功　能	廚餘輸送	馬達功率	2HPX1具
輸送量	8噸/小時	減速機規格	齒輪式, 減速比1/10
連座軸承(前)	UCP-210	本體長度	2.9~4M
止推軸承組	2210X1只/每組 30210X1只/每組	軸封規格	3/8"石墨迫緊軸封
傳動鏈輪	RS60X15T RS60X30T		

NOZZLE LIST

NO.	DESCRIPTION	Q'TY	SIZE	MATARIAL
N1	廚餘入口	1	400X400	SUS304X3t
N2	廚餘出料口	1	300X250	SUS304X3t

MATERIAL LIST

NO.	DESCRIPTION	Q'TY	MATERIAL	REMARKS
1	機　殼	1	SUS304	U10",4t
2	軸　心	1	SS400	ø3.5",SCH80
3	葉　片	1	SUS304	5t
4	支撐座	2	SS400	4吋槽鋼

數量：8台

序次	修改說明	日期	修改	審核	核准
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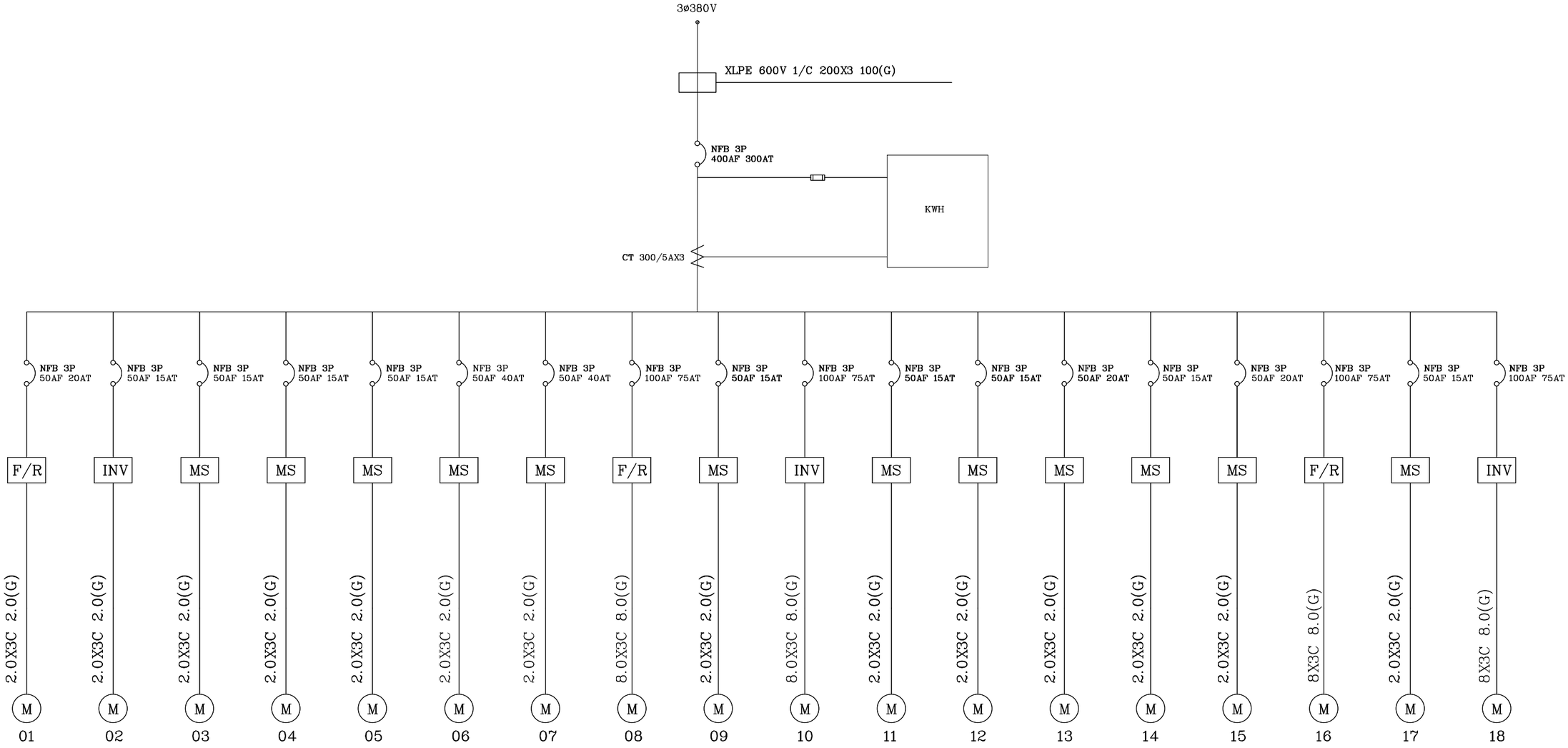
主辦機關：宜蘭縣政府環境保護局
審核　　日期
核准

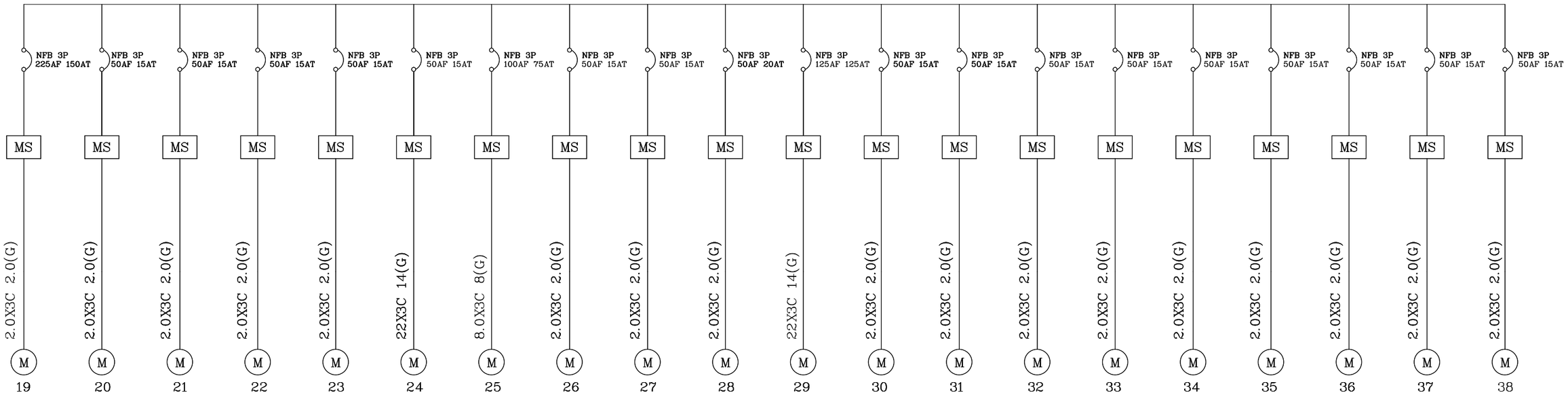
承攬廠商：尚碟工業有限公司
繪圖：邱坤昇　日期：109.02.22　比例
核准：周憲政　單位：mm

標案名稱：108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案
圖名：U-10吋通用螺運機
圖號：第 20 頁　版次



CKT NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
CURRENT(A)	5	1.9	3.5	1.1	1.1	3.5	5	27.5	3.5	27.5	5	1.9	3.5	3.5	5	27.5	3.5	27.5
LOAD NAME	翻桶機 3HP 2.2KW M1A	濾水螺運機 1HP 0.75KW M2A	揀拾平台輸送機 2HP 1.5KW M3A	篩除物輸送設備 0.5HP 0.4KW M3B	篩除物輸送設備 0.5HP 0.4KW M3C	磁選機 2HP 1.5KW M4A	螺運機 3HP 2.2KW M5A	雙軸細碎機 20HP 15KW M6A	螺運機 2HP 1.5KW M7A	固液分離機 20HP 15KW M8A	翻桶機 3HP 2.2KW M1B	濾水螺運機 1HP 0.75KW M2B	揀拾平台輸送機 2HP 1.5KW M3B	磁選機 2HP 1.5KW M4B	螺運機 3HP 2.2KW M5B	雙軸細碎機 20HP 15KW M6B	螺運機 2HP 1.5KW M7B	固液分離機 20HP 15KW M8B

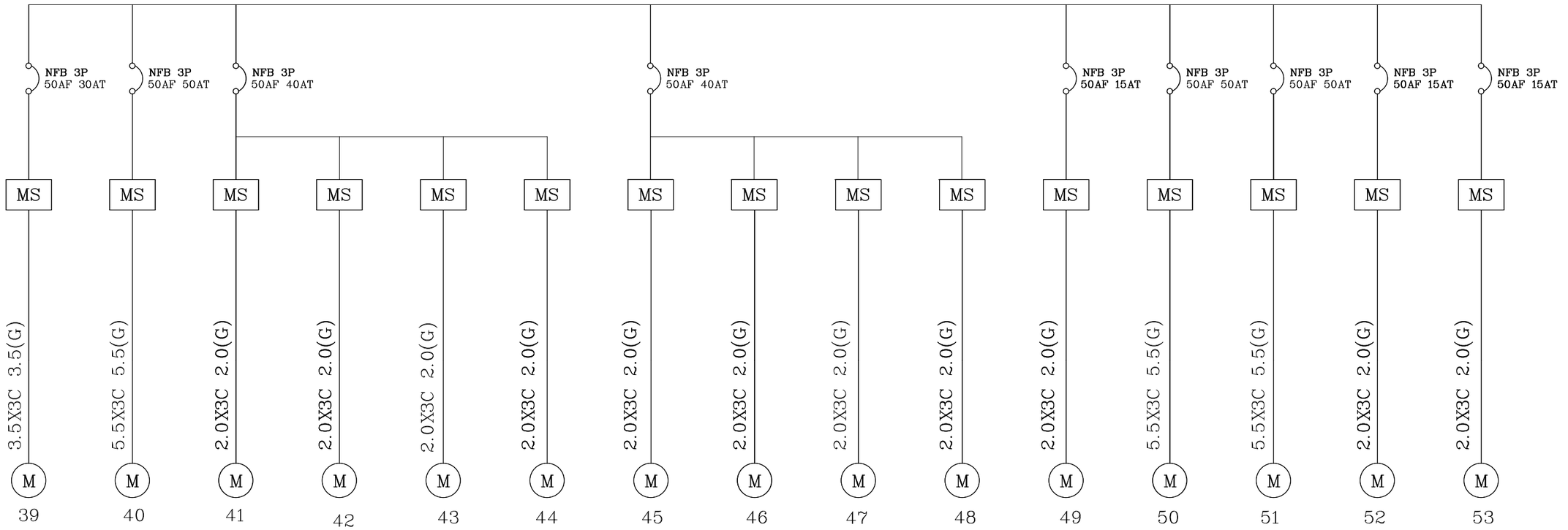
鴻陞機電行 HORNG SHENG ELECTRIC PLANT	設計 DESIGN	製圖 DRAWN	日期 DATE	客戶	尚碟工業有限公司	圖名 TITLE	108年宜蘭縣有機廢棄物處理機械設備設計、購置及安裝暨試營運維護管理統包案 系統單線圖-1	圖號 DRWG.NO
	黃柏樹	呂淑鳳	2020.02.27					第21頁



19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
3.5	3.5	3.5	3.5	3.5	3.5	27.5	3.5	3.5	3.5	54	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
10吋螺運機 2HP 1.5KW M9	6吋副資材螺運機 2HP 1.5KW M10	ø6吋螺運機 2HP 1.5KW M11	6吋雙向螺運機 2HP 1.5KW M12	10吋螺運機 2HP 1.5KW M13	10吋螺運機 2HP 1.5KW M14	加熱滅菌脫水設備 20HP 15KW M15	10吋螺運機 2HP 1.5KW M16	10吋螺運機 2HP 1.5KW M17	10吋螺運機 2HP 1.5KW M18	S-K100 高效能發酵機 40HP 30KW M19	10吋螺運機 2HP 1.5KW M20	10吋螺運機 2HP 1.5KW M21	10吋螺運機 2HP 1.5KW M22	10吋螺運機 2HP 1.5KW M23	10吋螺運機 2HP 1.5KW M24	ø960洗滌塔 2HP 1.5KW M26A	ø960洗滌塔 2HP 1.5KW M26B	冷凝器 2HP 1.5KW M27	鼓風機 2HP 1.5KW M28

鴻陞機電行
HORNG SHENG ELECTRIC PLANT

設計 DESIGN	製圖 DRAWN	日期 DATE	客戶	尚碟工業有限公司	圖名 TITLE	108年宜蘭縣有機廢棄物處理機械設備 設計、購置及安裝暨試營運維護管理統包案 系統單線圖-2	圖號 DRWG.NO		2 23
黃柏樹	呂淑鳳	2020.02.27						第22頁	



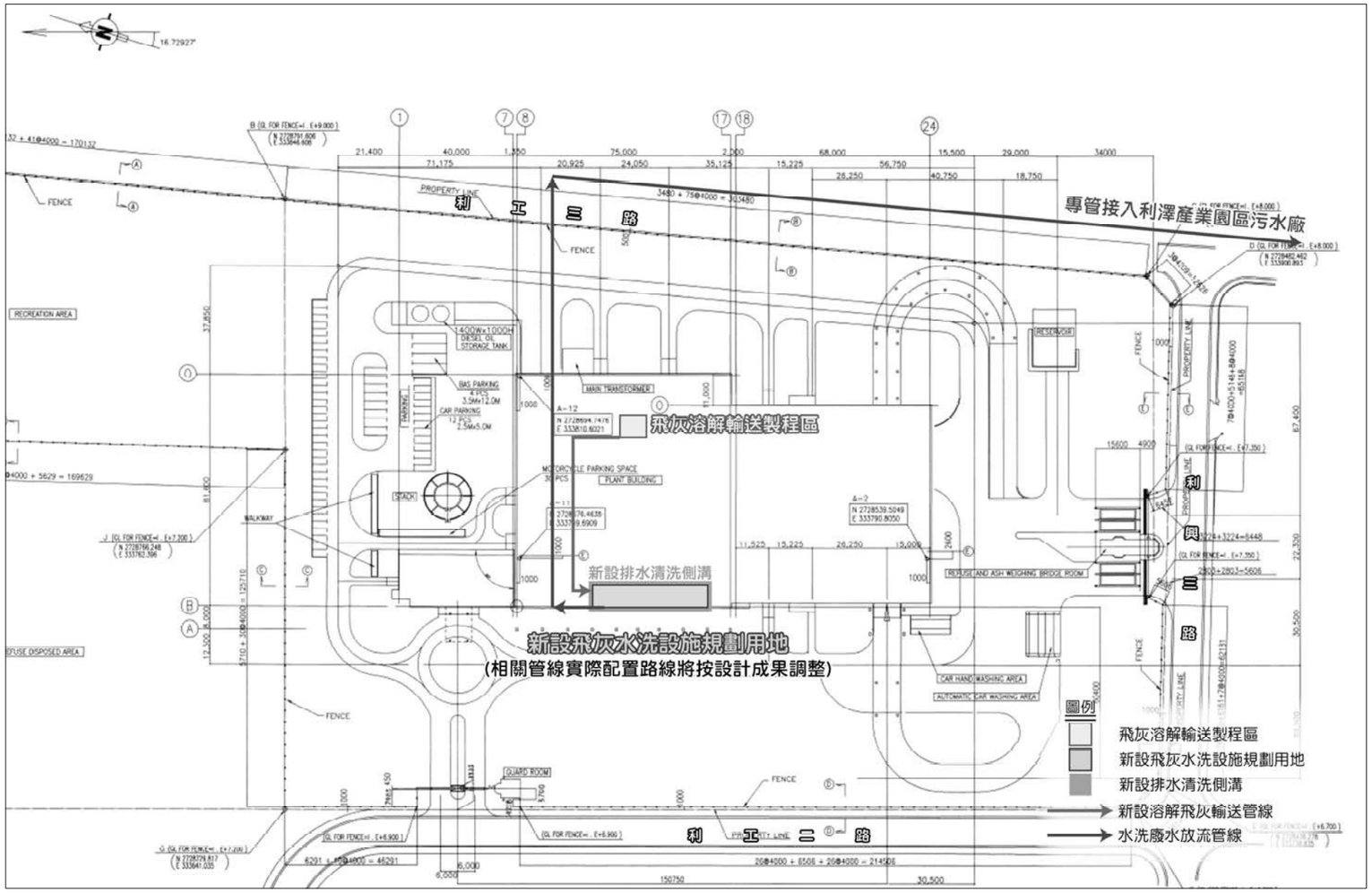
39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	TOTAL
7.8	15	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	15	15	3.5	3.5	338.4
冷卻水塔 5HP 3.7KW M29	循環水幫浦 10HP 7.5KW M30	漂白水噴霧幫 2HP 1.5KW M31	除臭室風扇 2HP 1.5KW M32A	除臭室風扇 2HP 1.5KW M32B	除臭室風扇 2HP 1.5KW M32C	除臭室風扇 2HP 1.5KW M32D	除臭室噴頭 2HP 1.5KW M33A	除臭室噴頭 2HP 1.5KW M33B	除臭室噴頭 2HP 1.5KW M33C	除臭室噴頭 2HP 1.5KW M33D	幫浦 10HP 7.5KW M37A	幫浦 10HP 7.5KW M37B	污水幫浦 2HP 1.5KW M38A	污水幫浦 2HP 1.5KW M38B	262HP 195.4KW

鴻陞機電行 HORNG SHENG ELECTRIC PLANT	設計 DESIGN	製圖 DRAWN	日期 DATE	客戶	尚磔工業有限公司		圖名 TITLE	108年宜蘭縣有機廢棄物處理機械設備 設計、購置及安裝暨試營運維護管理統包案		圖號 DRWG.NO		3 23
	黃柏樹	呂淑鳳	2020.02.27					系統單線圖-3			第23頁	

Part D　水洗廠建廠工程主要圖說

圖目錄

圖　號	圖　　名	圖　號	圖　　名
G-001	圖目錄、工程位置圖及一般說明	S-101	結構平面圖(一)
G-002	飛灰水洗系統流程與質量平衡圖	S-102	結構平面圖(二)
		S-201	立面圖
I-001	符號代號說明(一)	S-301	鋼構接合詳圖(一)
I-002	符號代號說明(二)	S-302	鋼構接合詳圖(二)
I-101	P&ID圖(一)	S-401	鋼構標準圖(一)
I-102	P&ID圖(二)	S-402	鋼構標準圖(二)
I-103	P&ID圖(三)	S-501	RC標準圖(一)
I-104	P&ID圖(四)	S-502	RC標準圖(二)
I-105	P&ID圖(五)		
I-106	P&ID圖(六)	STD-001	管線管件標準圖
I-107	P&ID圖(七)		
I-108	P&ID圖(八)	E-101	電氣單線圖(一)
I-109	P&ID圖(九)	E-102	電氣單線圖(二)
I-110	P&ID圖(十)	E-103	電氣單線圖(三)
		E-104	電氣單線圖(四)
P-001	水洗系統全區配置圖	E-105	電氣單線圖(五)
P-002	飛灰輸送與溶解區配置圖	E-106	電氣單線圖(六)
P-003	水洗系統平面配置圖	E-107	電氣箱體圖
P-004	水洗系統立面圖	E-108	MP PANEL箱體圖
		E-109	MCP-1 PANEL箱體圖
M-001	WT101 飛灰秤重槽	E-110	MCP-2 PANEL箱體圖
M-002	飛灰溶解槽	E-111	MCP-3 PANEL箱體圖
M-003	第一段水洗槽	E-112	MCP-4 PANEL箱體圖
M-004	第二段水洗槽	E-113	CP PANEL箱體圖
M-005	40m2 快沉槽		
M-006	PE桶槽(一)		
M-007	PE桶槽(二)		
M-008	BT401 灰渣濾餅緩衝槽		
M-009	水洗灰濾餅碎機		



工程位置圖

一般說明:

1. 本工程為新建飛灰水洗設施及廢水處理系統。
2. 施工用水電由業主提供。
3. 施工期間設置全阻隔式圍籬及管制門。
4. 管架橋基礎螺栓由機電工程配合預埋。
5. 材料檢(試)驗應由合格TAF實驗室執行。
6. 本案施工中若有損壞及破壞既有設備及設施，廠商須無償修復，並賠償一切損失。
7. 池體試壓由業主供水，廠商自備進排水臨時器具。
8. 本案乙烯脂塗佈須配合機電預埋件或固定物完成後施作。

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

鎧和環保服務股份有限公司 Onyx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

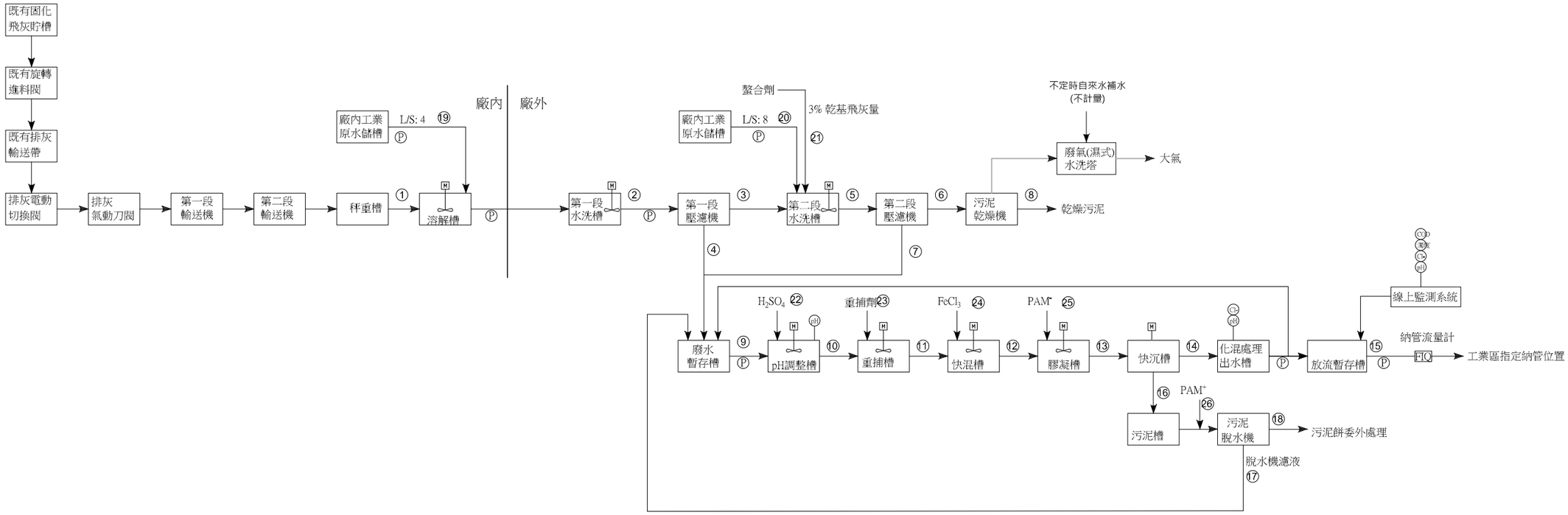
TITLE :

圖目錄及一般說明

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			G-001		

CENTURY ENVIRONTECH CO., LTD 松橋環保科技股份有限公司

JOB NO. -



飛灰水洗系統流程與質量平衡圖

編號	1	2	3	4	5	6	7	8	**
名稱	飛灰入料	第一段水洗溶解液	第一段水洗濾餅	第一段水洗濾液	第二段水洗溶解液	第二段水洗濾餅	第二段水洗濾液	乾燥濾餅	混和濾液
不溶固體 (%)	35								
含水率 (%)			50			40		30	
Q (ton/day)	20		14		174.6	11.67		10	
Q (m^3/day)		80		73	167.6		162.93		235.93
Cl^- (%)	20.75	5.14	2.57	5.14	0.21	0.09	0.21	0.1	1.74
Cl^- (ton/day)	4.11	4.11	0.36	3.75	0.36	0.01	0.35	0.01	4.1

編號		9	10	11	12	13	14	15	16	17	18
名稱	廢水進流	廢水暫存槽出水	pH調整槽出水	重捕槽出水	快混槽出水	膠凝槽出水	快沉槽出水	放流水	化混污泥	污泥脫水機濾液	污泥餅
Q (m^3/day)	240.00	245.48	242.04	242.30	242.32	242.91	237.07	237.07	5.84	6.01	232.24 kg
pH	10	10	8-9	8-9	7-9	7-9	7-9	7-9	7-9	7-9	含水率50%
SS (mg/L)	150.00	151.01	151.06	477.05	525.69	529.27	50	50	20000	195.13	
SS (kg/day)	36.00	37.07	36.56	115.59	127.39	128.57	11.85	11.85	116.71	1.17	
COD (mg/L)	74.67	74.65	74.63	74.55	74.54	74.36	74.36	74.36	74.36	74.36	
COD (kg/day)	17.92	18.33	18.06	18.06	18.06	18.06	17.63	17.63	0.43	0.45	
NH_3-N (mg/L)	11.75	11.75	11.74	11.73	11.73	11.70	11.70	11.70	11.70	11.70	
NH_3-N (kg/day)	2.82	2.88	2.84	2.84	2.84	2.84	2.77	2.77	0.07	0.07	
NO_3^- (mg/L)	5.43	5.43	5.43	5.42	5.42	5.41	5.41	5.41	5.41	5.41	
NO_3^- (kg/day)	1.30	1.33	1.31	1.31	1.31	1.31	1.28	1.28	0.03	0.03	
Cu (mg/L)	1.71	1.67	1.67	0.33	0.33	0.33	0.33	0.33	0.33	0.33	
Cu (kg/day)	0.41	0.41	0.40	0.08	0.08	0.08	0.08	0.08	0.002	0.002	
Pb (mg/L)	70.00	68.45	68.42	0.14	0.14	0.14	0.14	0.14	0.14	0.14	
Pb (kg/day)	16.80	16.80	16.80	0.03	0.03	0.03	0.03	0.03	0.03	0.03	
Zn mg/L	8.31	8.16	8.14	1.63	1.63	1.62	1.62	1.62	1.62	1.62	
Zn (kg/day)	1.99	2.00	1.97	0.39	0.39	0.39	0.38	0.38	0.01	0.01	

編號	19	20	21	22	**	23	24	25	26
化藥名稱	第一次水洗自來水注水	第二次水洗自來水注水	螯合劑	H_2SO_4	NaOH	重捕劑	$FeCl_3$	PAM⁻	PAM⁺
加藥濃度				50%	45%	15%	40%	0.2%	0.2%
注入量	80	160	0.60	0.10	備用	0.25	0.02	0.59	0.26
單位	m^3/day	m^3/day	m^3/day	m^3/day	m^3/day	m^3/day	m^3/day	m^3/day	m^3/day

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

遠和環保服務股份有限公司 Onyx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

TITLE : 飛灰水洗系統流程與質量平衡圖

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR		REPLACED BY
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			G-002		

CENTURY ENVIRONTECH CO., LTD 松橋環保科技股份有限公司

JOB NO.

閥、管件及操作器

- 球閥
- 閘閥
- 閘刀閥
- 蝶閥
- 底閥
- 逆止閥
- 氣動閥-球閥
- 氣動閥-蝶閥
- 電磁閥(常閉型)
- 洩氣閥
- 洩壓閥
- 卻水閥
- 注藥箱快速接頭
- 底排
- 法蘭
- 大小頭
- 彈性接頭
- Y型過濾器
- 共管

機械設備

- 馬達
- 液體輸送泵
- 轉子泵
- 氣動泵
- 定量加藥泵
- 鼓風機
- 攪拌機
- 消音器
- 過濾器
- 變頻器

檢測元件

- 電磁式流量計
- 蹼輪式流量計
- 面積式流量計
- 雷達式液位計
- 超音波液位計
- 浮球式液位計
- 側壓式液位計

管線標註說明

WW-304-01-UPVC-2"

- 管徑尺寸
- 管線材質編號
- 流水號
- 系統設備編號
- 管線輸送流體編號

管線代號

圖示	說 明	
———	WW	廢水
·····	ASH	飛灰
———	SLDG	污泥
·····	WG	廢氣
—— CW ——	CW	自來水
—— HCW ——	HCW	高壓自來水
—— CDA ——	CDA	空壓氣源
———	$FeCl_3$	混凝劑
———	NaOH	氫氧化鈉
———	H_2SO_4	硫酸
———	PAM+/-	高分子凝聚劑
———		螯合劑/重金屬捕捉劑
– — — — –		訊號線

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

遠和環保服務股份有限公司 Cnyx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

TITLE :

符號代號說明(一)

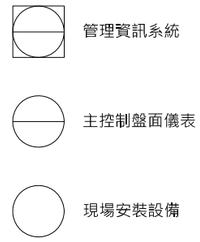
	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			I-001		

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

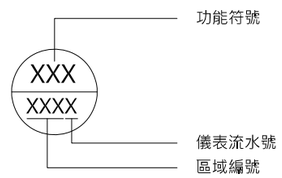
JOB NO.

字母	第一字母				後續字母					
	表示計量或起始變化 MEASURED OR INITIATION VARIABLE		用於修飾或形容 MODIFIER		讀出或被動功能 READOUT OR PASSIVE FUNCTION		輸出功能 OUTPUT FUNCTION		用於修飾或形容 MODIFIER	
A	分析	ANALYSIS			警報	ALARM				
B	燃燒器(火焰)	BURNER (FLAME)			程式設定	PROGRAMMER				
C	電導度	CONDUCTIVITY	通訊	COMMUNICATION			控制	CONTROL		
D	密度或比重	DENSITY OR SPECIFIC GRAVITY	差別	DIFFERENTIAL						
E	電壓(電動勢)	VOLTAGE(EMF)			主要元件	PRIMARY ELEMENT				
F	流量	FLOW RATE	比例(分數)	RATIO						
G	計量(尺寸容量)	GAGING (DIMENSIONAL)			玻璃(顯示機構)	GLASS VIEWING				
H	手控制(人工控制)	HAND (MANUAL)								
I	電流	CURRENT (ELECTRIC)			指示	INDICATE				
J	功率	POWER	掃描	SCAN						
K	時間或時間表	TIME OR TIME SCHEDULE	變化時間	TIME RATE OF CHANGE			控制站	CONTROL STATION		
L	水位	LEVEL			燈光(導引)	LIGHT (PILOT)			低	LOW
M	馬達(水分或濕度)	MOTOR (MOISTURE OR HUMIDITY)	瞬間	MOMENTARY					中間	MIDDLE OR INTERMEDIATE
N			點火器	IGNITER						
O	操作	OPERATION			孔口或限制	ORIFICE OR RESTRICTION				
P	壓力或真空	PRESSURE OR VACUUM			點(試驗接頭)	POINT (TEST CONNECTION)				
Q	數量或事件	QUANTITY OR EVENT			累計或總和	INTRGRATE OR TOTAIZE				
R	放射性	RADIATION	遠方	REMOTE	紀錄或印出	RECORD OR PRINT				
S	速率或頻率	SPEED OR FREQUENCY	安全	SAFETY	順序控制	SEQUENCE	開關	SWITCH		
T	溫度	TEMPERATURE					傳送	TRNSMIT		
U	多種變化	MULTIVARIABLE			多種功能	MULTIFUNCTION			單元	UNIT
V	黏度(機械分析)	VISCOSITY (MECHANICAL ANALYSIS)					閥、閘門或遮板	VALVE, DAMPER OR LOUVER		
W	重量或力量	WEIGHT OR FORCE			井口	WELL				
X	未分類變數(如所示)	UNCLASSIFIED VARIABLE (AS NOTED)	X軸	X-AXIS						
Y	事件、狀態或存在項目	EVENT STATE OR PRESENCE	Y軸	Y-AXIS			轉送或計算 (信號修飾)	RELAY OR COMPUTE (SIGNAL MODIFIER)		
Z	位置、尺寸	POSITION DIMENSION	Z軸	Z-AXIS			開動器或未分	DRIVE ACTUATOR OR UNCLASSIFIED FINAL CONTROL ELEMENT		

儀表控制符號



儀表編號規則



REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

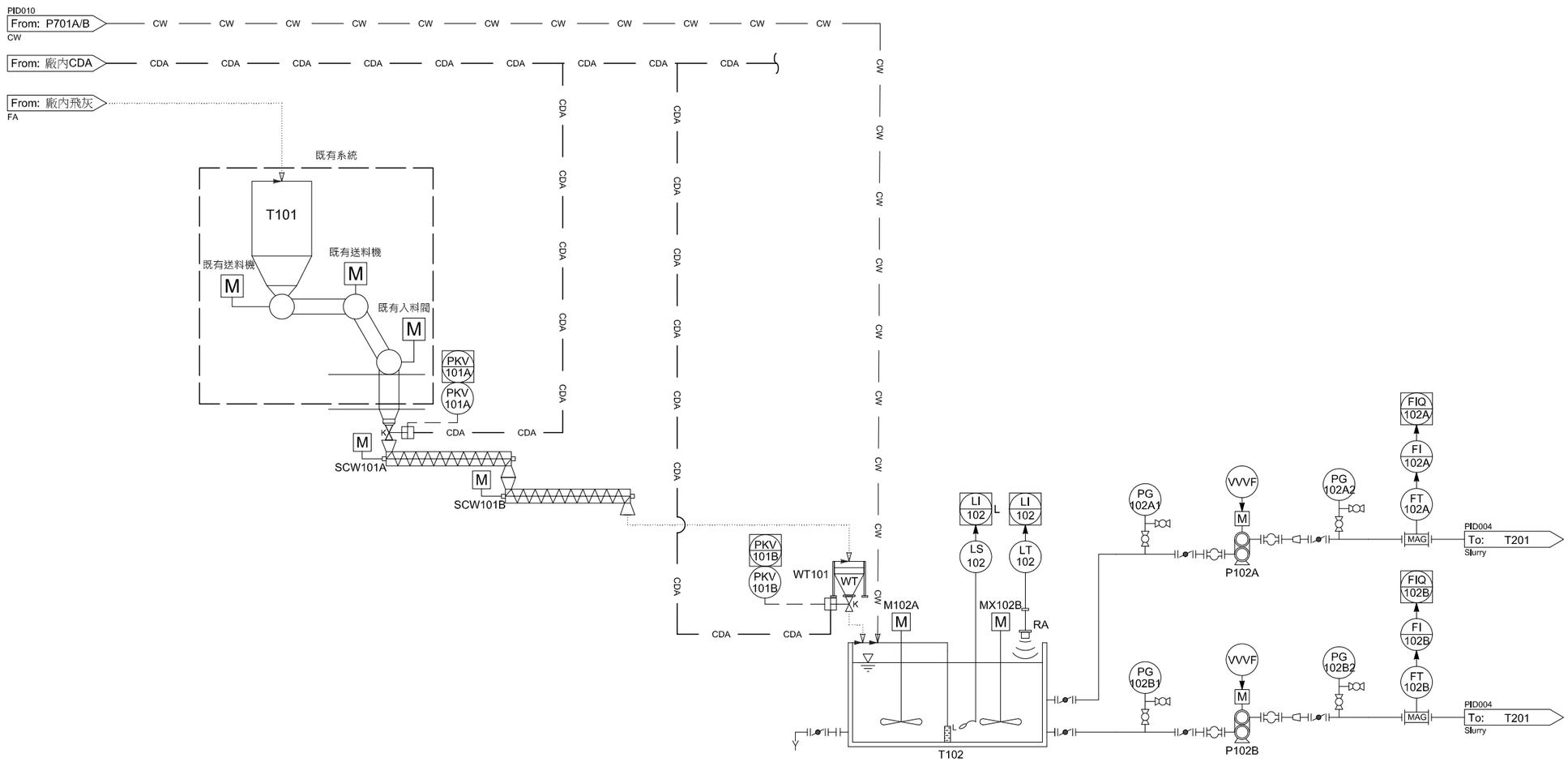
	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			I-002		

TITLE :

符號代號說明(二)

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

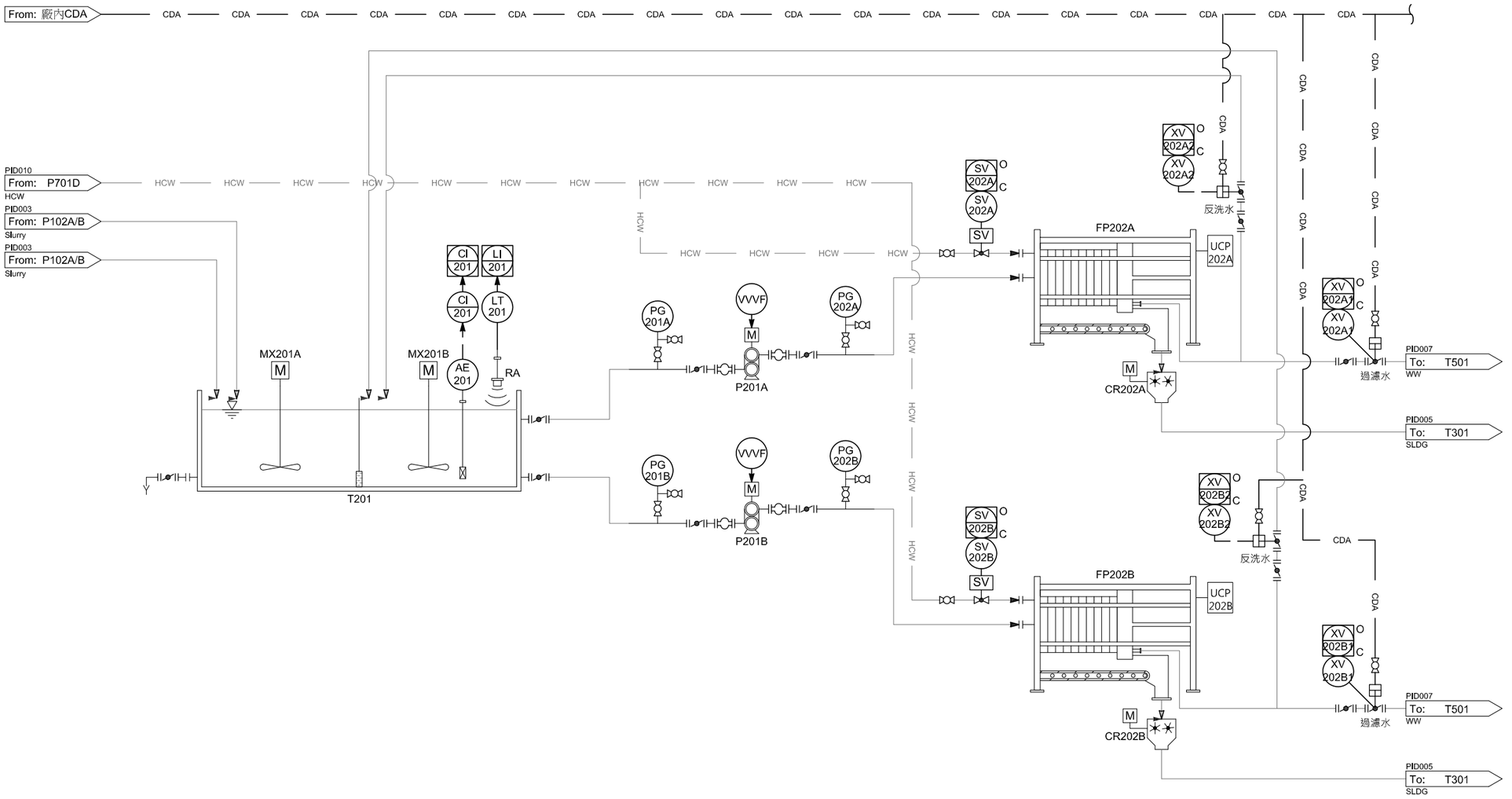
JOB NO.



編號	T101	PKV101A	SCW101A	SCW101B	WT101	PKV101B	T102	MX102A/B	LIT102	LIS102	P102A/B	FIQ102A/B
名稱	飛灰暫存槽	進灰鎖刀閥	飛灰暫存槽 出料機	秤重槽 進料機	飛灰秤重槽	下料鎖刀閥	溶解槽	溶解槽攪拌機	溶解槽液位計	溶解槽 低液位保護器	溶解槽輸送泵	溶解槽輸送泵 流量計
型式		氣動式刀閥	螺旋輸送機	螺旋輸送機	電子式 秤重系統	氣動式刀閥	雙槽式溶解槽	快混攪拌機	雷達波液位計	浮球開關	轉子泵	電磁式流量計
規格		10"	170LPM	170LPM	0-1.0T	10"	5.4m^3	120RPM	0-100%	L	18CMH x20mH	3"
材質		SS41	SS41+ 防鏽處理	SS41+ 防鏽處理	槽體:SS41+ 防鏽處理	本體SUS304	SS41+FRP	接液部位 SS41+FRP	感測器材質 PVDF		EPDM轉子 黑化耐層板	
備註	既有	氣動閥驅動	參考馬力 2.2kW+VFD	參考馬力 2.2kW+VFD		氣動閥驅動		0.75kW*2			4kW*2 +VFD	

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

遠和環保服務股份有限公司 Cnyx Ta-Ho Environmental Services Co., Ltd		宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County			
TITLE: P&ID圖(一)					
	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.	REV.		DWG. NO.	REV.	
			I-101		
CENTURY ENVIRONTECH CO., LTD 松橋環保科技股份有限公司			JOB NO.		



編號	T201	MX201A/B	LIT201	CI201	P201A/B	FP202A/B	CR202A/B	SV202A/B	XV202A1/B1	XV202A2/B2
名稱	第一段水洗槽	第一段水洗 攪拌機	第一段水洗槽 液位計	第一段水洗槽 氯離子監測儀	第一段壓濾機 進流泵	第一段壓濾機	第一段 濾餅破碎機	第一段壓濾機 清洗開關	第一段壓濾機 過濾水開關	第一段壓濾機 反洗水開關
型式	雙槽式方形槽	快混攪拌機	雷達波液位計	線上監測儀	轉子泵	板框式脫水機	攪拌棒式 攪拌機	高壓電磁閥	氣動蝶閥	氣動蝶閥
規格	30m^3	120rpm	0-100%	0-10%	24CMH x8kgf/cm^2	腔體910L	雙軸式破碎機	2"	4"	4"
材質	SS41+FRP	接液部位 SS41+FRP	感測器材質 PVDF		EPDM轉子 黑化耐磨板	PP濾板 PP濾布	本體SUS304	本體SUS304	PVC閥體	PVC閥體
備註		1.5kW*2	具通訊輸出 接點	具通訊輸出 接點	15kW*2 +VFD	自動開模, 附輸送帶	0.75kW*2	40W	具接點輸出	具接點輸出

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

鎧和環保服務股份有限公司
Cryx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局
Environmental Protection Bureau , Yilan County

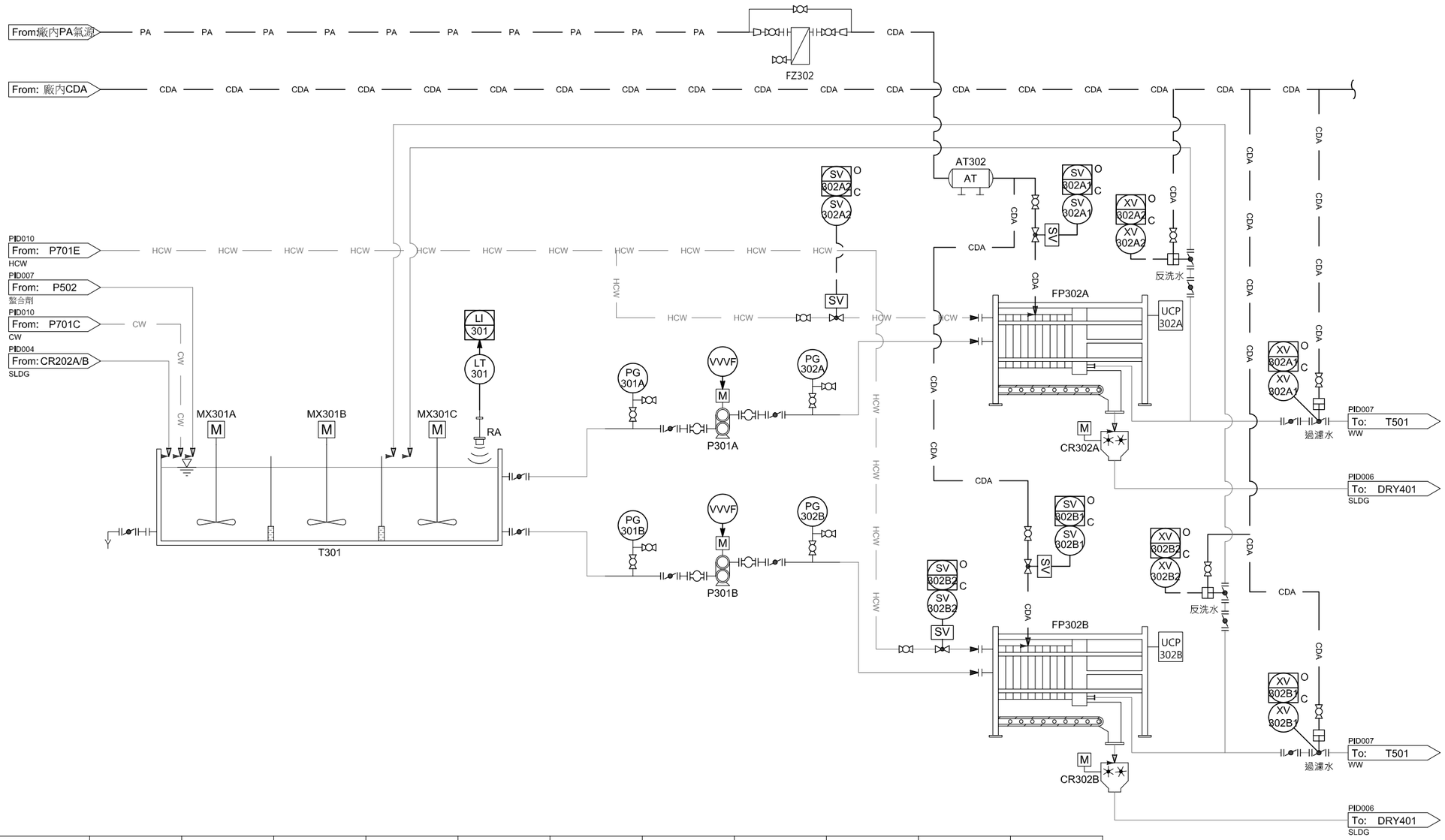
TITLE :

P&ID圖(二)

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			I-102		

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

JOB NO.



編號	T301	MX301A~C	LIT301	P301A/B	FP302A/B	FZ302	AT302	SV302A1/B1	SV302A2/B2	CR302A/B	XV302A1/B1	XV302A2/B2
名稱	第二段水洗槽	第二段水洗 攪拌機	第二段水洗槽 液位計	第二段壓濾機 進流泵	第二段壓濾機	冷凍乾燥機	二次加壓 壓縮空氣儲槽	第二段壓濾機 二次加壓開關	第二段壓濾機 反洗開關	第二段 濾餅破碎機	第二段壓濾機 過濾水開關	第二段壓濾機 反洗水開關
型式	三槽式方形槽	快混攪拌機	雷達波液位計	轉子泵	二次加壓式板 框式脫水機	CDA 冷凍乾燥機	立式空氣儲槽	電磁閥	高壓電磁閥	攪拌棒式 攪拌機	氣動閥	氣動閥
規格	45m^3	120rpm	0-100%	48CMH x8kgf/cm^2	腔體910L	3CMM	1000L	1"	2"	雙軸式破碎機	4"	4"
材質	SS41+FRP	接液部位 SS41+FRP	感測器材質 PVDF	EPDM轉子 黑化耐磨板	PP濾板 PP濾布		SS41	SUS304	SUS304	SUS304	PVC閥體	PVC閥體
備註		1.5kW*3		22kW*2 +VFD	自動開模, 附輸送帶	0.55kw	具壓力容器 證明	40W	40W	0.75kW*2	具接點輸出	具接點輸出

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

綠和環保服務股份有限公司
Onyx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局
Environmental Protection Bureau , Yilan County

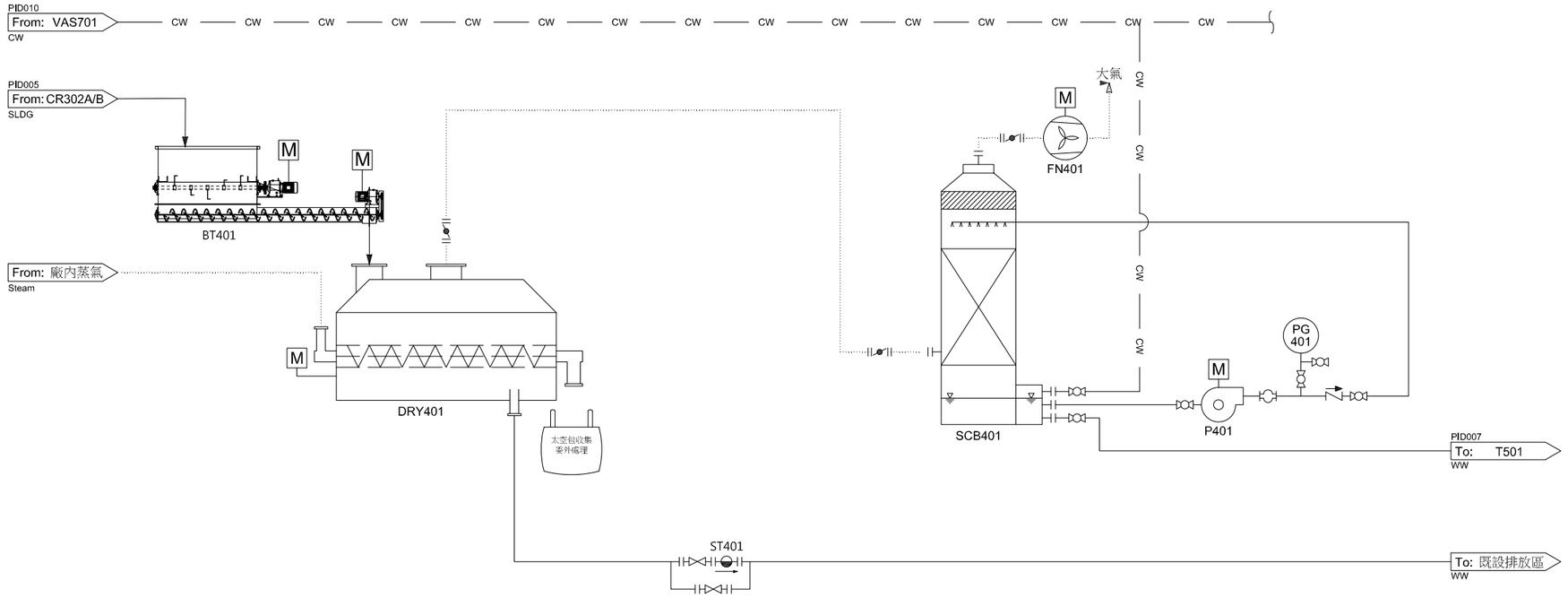
TITLE :

P&ID圖(三)

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			I-103		

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

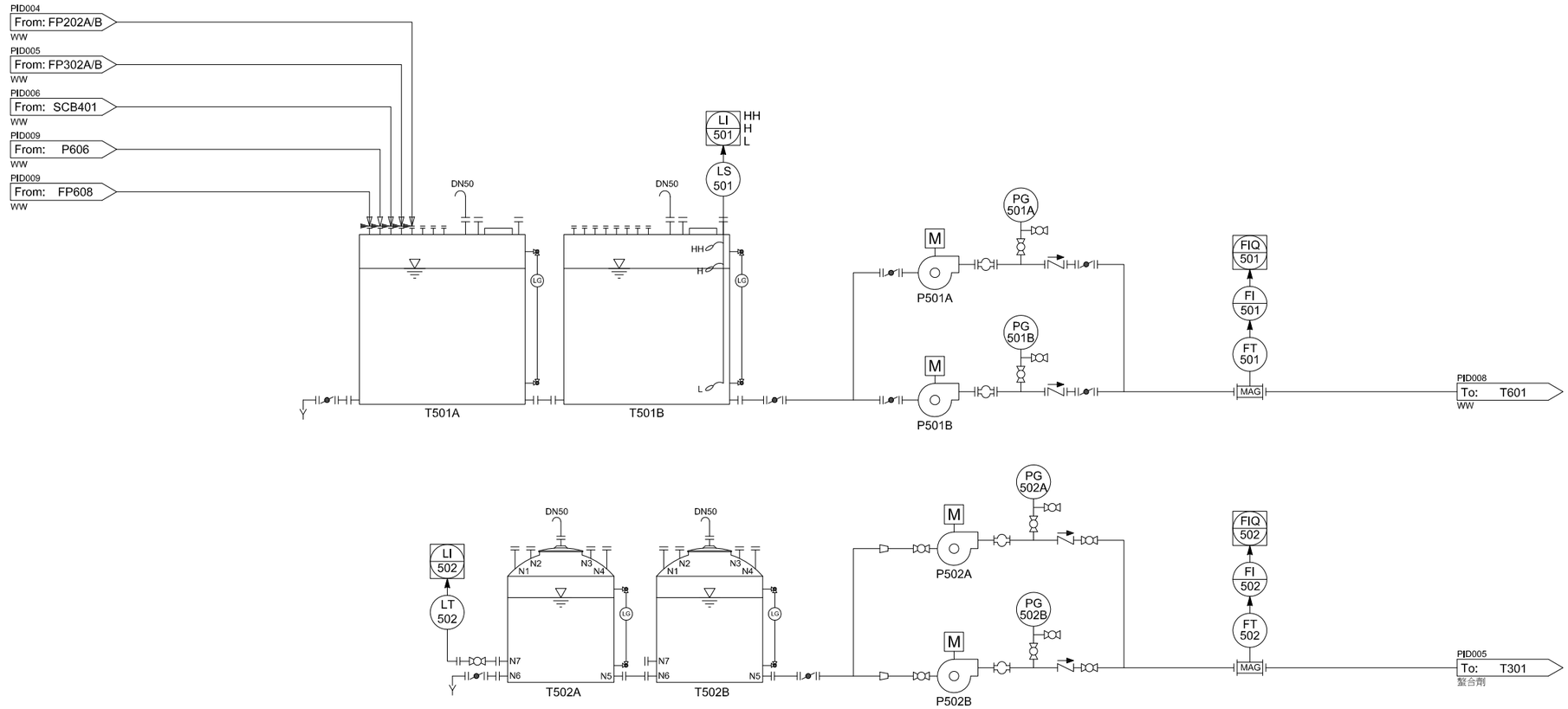
JOB NO.



編號	BT401	DRY401	ST401	SCB401	FN401	P401
名稱	濾餅緩衝進料槽	濾餅乾燥機	卻水閥	廢氣水洗塔	水洗塔風車	水洗塔循環泵
型式	緩衝槽+螺旋進料機	雙軸夾套型 乾燥機	浮球式卻水器	立式水洗塔	直結透浦式	同軸循環泵
規格	2M3緩衝槽 +Dia200進料機	污泥乾燥能力 300kg/hr-water	2"	Dia600mm x 3800mmH	35CMM x145mmAq	15M, 240LPM
材質	本體SS41+內部FRP 防架橋攪拌機: SUS304 螺旋進料機:SUS304	本體SUS304 攪拌軸心: 高碳鋼	SS41	本體PP材質	PP	本體: GFRPP
備註	攪拌機: 1.5kw 進料機1.5kw,變頻功能	15kW,變頻功能		8" 出口	1.5kW	0.75kW

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

德和環保服務股份有限公司 Cryx Te-Ho Environmental Services Co., Ltd.			宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County		
TITLE : P&ID圖(四)					
	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			I-104		
CENTURY ENVIRONTECH CO., LTD 松橋環保科技股份有限公司			JOB NO.		



編號	T501	LIS501	P501A/B	FIQ501	T502A/B	LIT502	P502A/B	FIQ502
名稱	廢水暫存槽	廢水暫存槽 液位計	廢水系統 進流泵	廢水系統 進流流量計	螯合劑儲槽	螯合劑儲槽 液位計	螯合劑輸送泵	螯合劑流量計
型式	立式PE桶	浮球開關	離心泵	電磁式流量計	立式PE桶	隔膜式側壓 感應液位計	離心泵	電磁式流量計
規格	40m^3*2	HH、H、L	40CMH x12mH	3"	5m^3*2	0-100%	60LPM x10mH	1"
材質	PE		本體FC 葉輪:SCS13	本體FC 哈式合金探頭	PE	陶瓷隔膜 接液部位PVDF	本體FC	本體FC 哈式合金探頭
備註			3.7kW*2				0.37*2kW	

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

Onyx Te-Ho Environmental Services Co., Ltd. 德和環保服務股份有限公司

宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

TITLE :

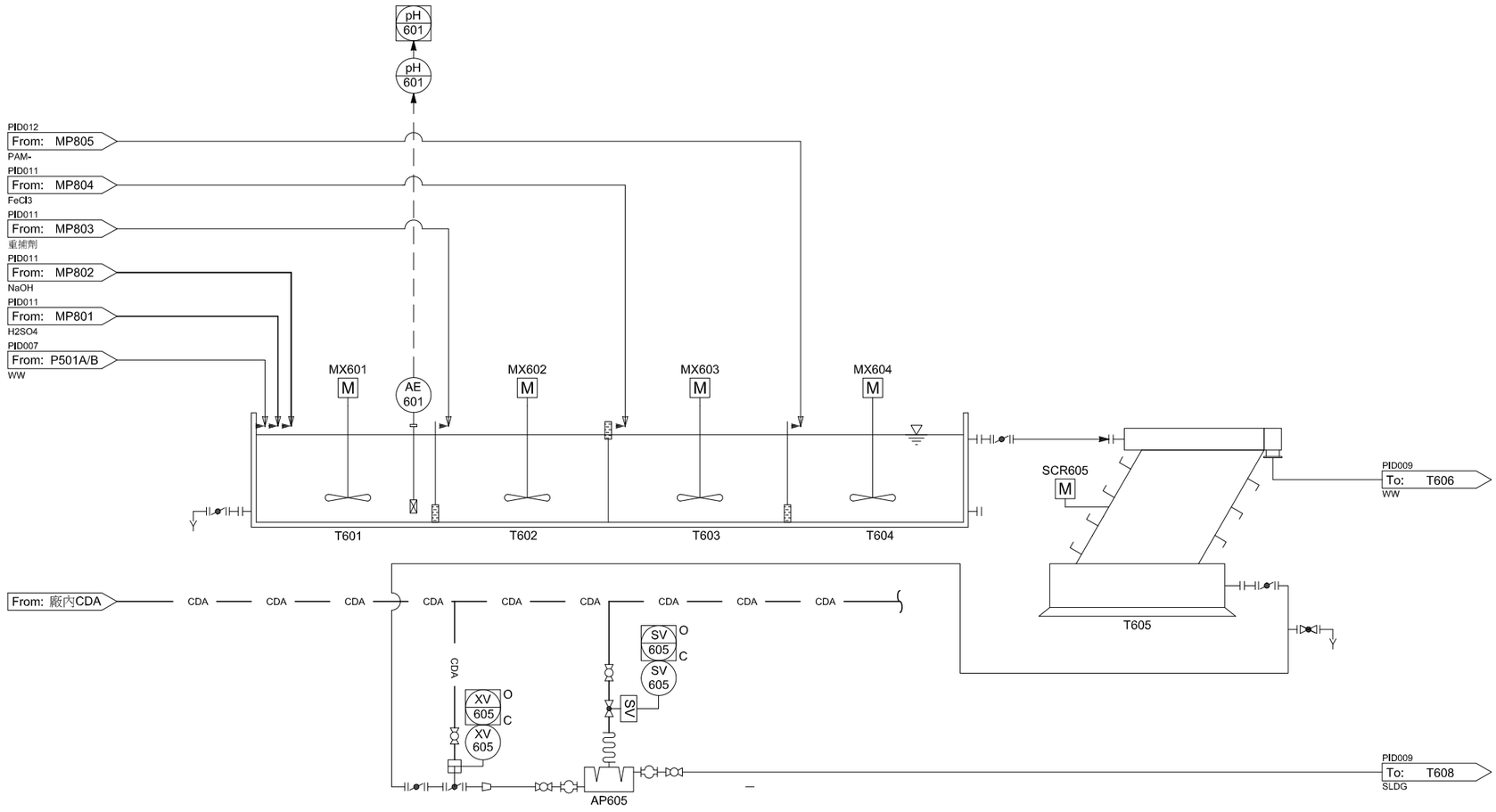
P&ID圖(五)

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	

SUBCONTRACTOR DWG.NO.	REV.	DWG. NO.	REV.
		I-105	

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

JOB NO.



編號	T601	MX601	pH601	T602	MX602	T603	MX603	T604	MX604	T605	SCR605	AP605	SV605	XV605
名稱	pH調整槽	pH調整槽 攪拌機	pH控制計	重捕槽	重捕槽 攪拌機	快混槽	快混槽 攪拌機	膠凝槽	膠凝槽 攪拌機	快沉槽	快沉槽刮泥機	快沉槽排泥泵	快沉槽 排泥泵開關	快沉槽 污泥遮斷閥
型式	方形槽	快混攪拌機	0-14	方形槽	快混攪拌機	方形槽	快混攪拌機	方形槽	慢混攪拌機	傾斜板沉澱槽		氣動泵	電磁閥	氣動蝶閥
規格	5.2m^3	120rpm	浸沒式電極 含控制錶頭	5.2m^3	120rpm	5.2m^3	120rpm	8m^3	30rpm	40M2		1.5"	1/2"	2"
材質	SS41+FRP	接液部位 SS41+FRP		SS41+FRP	接液部位 SS41+FRP	SS41+FRP	接液部位 SS41+FRP	SS41+FRP	接液部位 SS41+FRP	SS41+FRP	SS41+FRP	PP	本體 SUS304	PVC閥體
備註		1.5kW	具訊號輸出		1.5kW		1.5kW		0.37kW		0.37kW			具接點輸出

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

鎧和環保服務股份有限公司 Cnyx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

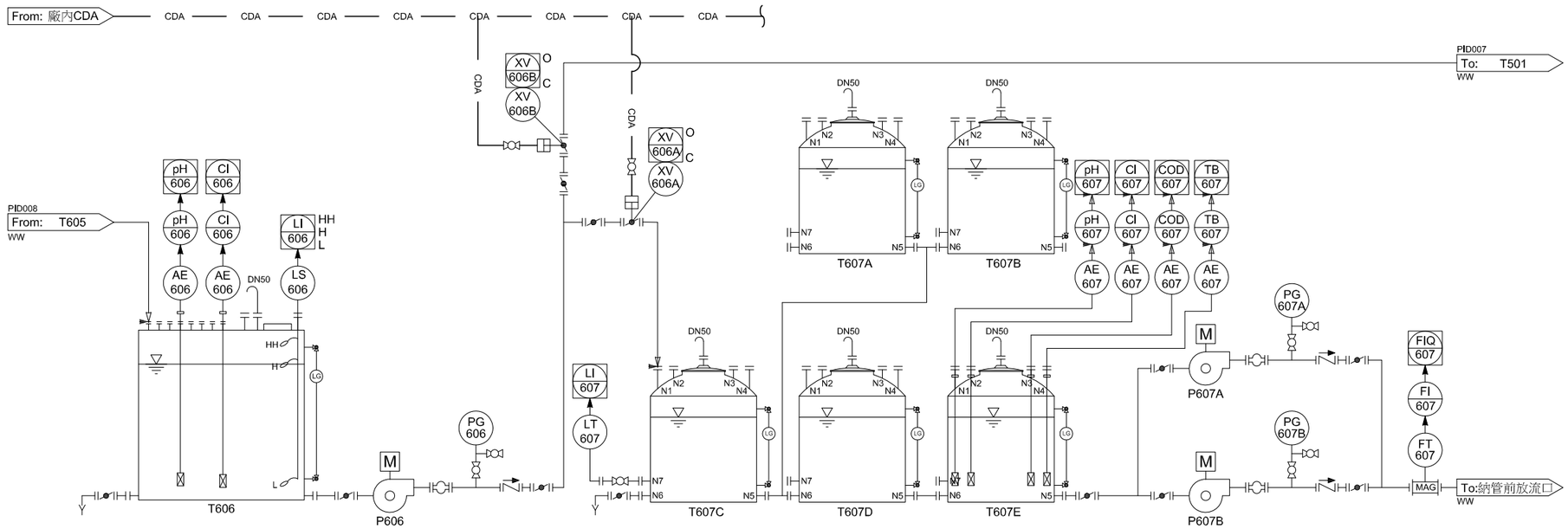
TITLE :

P&ID圖(六)

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			I-106		

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

JOB NO.



編號	T606	pH606	Cl606	LIS606	P606	T607A~E	LIT607	pH607	Cl607	TB607	COD607	P607A/B	FIQ607	T608	MX608	LIT608	AP608	SV608	FP608
名稱	化混出水暫存槽	化混出水槽 pH計	化混出水槽 氯離子監測儀	化混出水槽液位計	化混出水槽 輸送泵	放流暫存槽	放流暫存槽液位計	放流暫存槽pH計	化混出水槽氯離子監測儀	放流暫存槽濁度計	放流暫存槽COD分析儀	放流泵	放流流量計	污泥暫存槽	攪泥機	污泥槽液位計	污泥脫水機進流泵	污泥進流泵開關	污泥脫水機
型式	立式PE桶槽	0-14	探頭	浮球開關	離心泵	立式PE桶槽	隔膜式側壓感應液位計	0-14	探頭	0-1000 NTU	0-1000 mg/L	離心泵	電磁式流量計	錐底	慢混型	雷達波液位計	氣動泵	電磁閥	板框式脫水機
規格	10m^3	浸沒式電極 含控制錶頭	0-5%	HH、H、L	48CMH x15mH	50m^3*5	0-100%	浸沒式電極 含控制錶頭	0-2%			30CMH x20mH	3"	5m^3	30RPM	0-100%	1.5"		160L/批次
材質	PE				本體FRPP	PE	陶瓷隔膜 接液部位 PVDF					本體GFRPP	本體FC 哈式合金 探頭	PE	接液部位 SS41+FRP		PP		
備註		具訊號輸出	具訊號輸出		3.7kW		具訊號輸出	具訊號輸出	具訊號輸出	具訊號輸出	批次式分析	3.7W*2	FIQ輸出		0.37kW	具訊號輸出			自動開模 手動清洗

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

鎧和環保服務股份有限公司 Cryx Ta-Ho Environmental Services Co., Ltd

宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

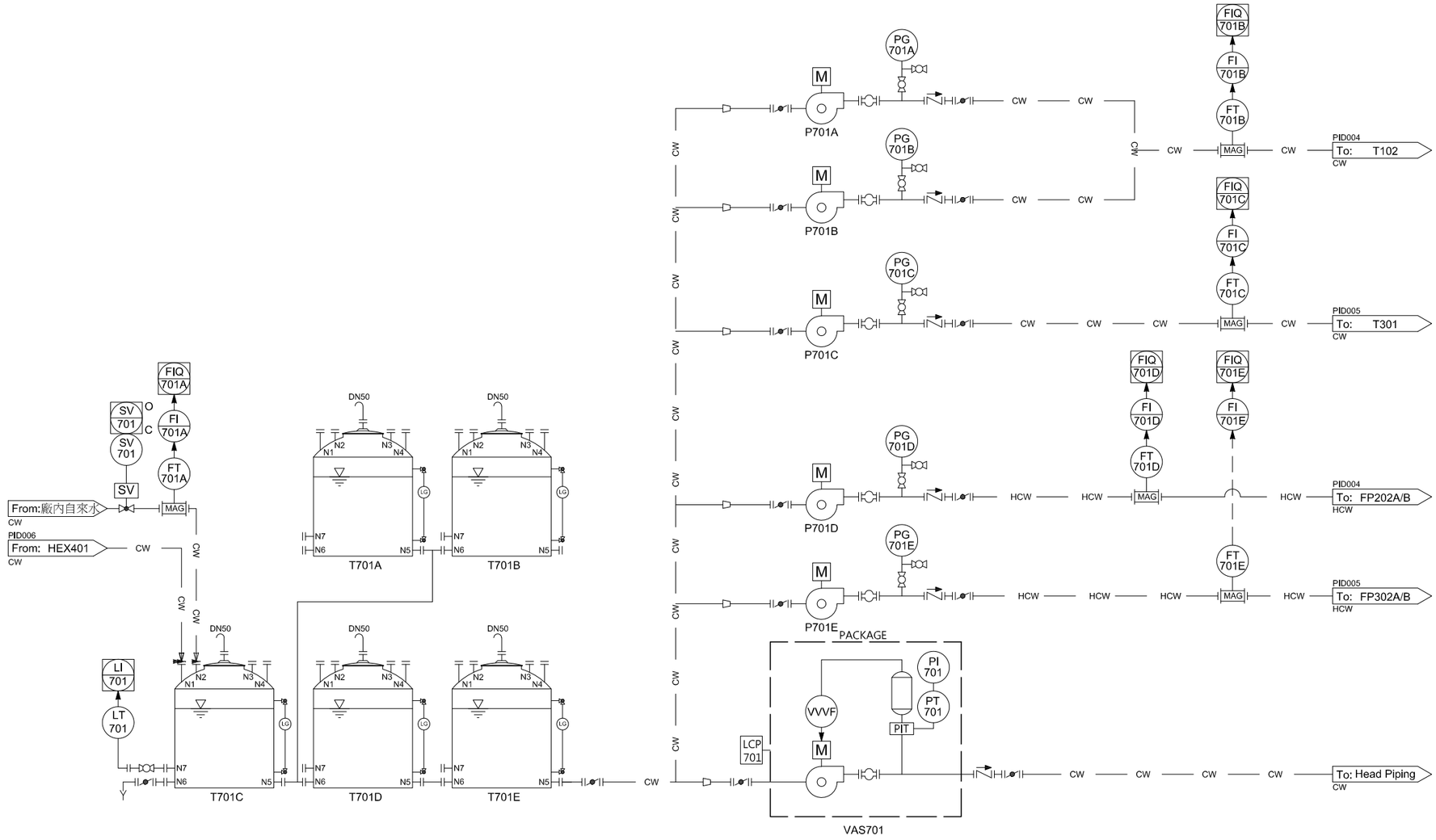
TITLE :

P&ID圖(七)

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			I-107		

CENTURY ENVIRONTECH CO., LTD 松橋環保科技股份有限公司

JOB NO.



編號	SV701	FIQ701A	T701A~E	LIT701	P701A/B	FIQ701B	P701C	FIQ701C	P701D	FIQ701D	P701E	FIQ701E	VAS701
名稱	自來水 補水閥	自來水計量 流量計	自來水槽	自來水槽 液位計	溶解槽 注水泵	溶解槽 注水流量計	第二段水洗槽 注水泵	第二段水洗槽 注水流量計	第一段壓濾機 清洗泵	第一段壓濾機 反洗流量計	第二段壓濾機 清洗泵	第二段壓濾機 反洗流量計	廠區自來水 加壓泵
型式	電磁閥	電磁式流量計	立式PE桶槽	隔膜式側壓 感應液位計	離心泵	電磁式流量計	離心泵	電磁式流量計	高壓清洗泵 多段離心泵	電磁式流量計	高壓清洗泵 多段離心泵	電磁式流量計	恆壓加壓泵
規格	2",NC	2"	50m^3 *5	0-100%	20CMH x15mH	2"	96CMH x10mH	4"	195LPM x200mH	2"	195LPM x200mH	2"	15CMH x3kgf/cm^2
材質	銅合金	SUS316探頭	PE	SUS316膜片	本體FC 葉輪SCS13	SUS316探頭	本體FC 葉輪SCS13	SUS316探頭	本體FC 葉輪SCS13	SUS316探頭	本體FC 葉輪SCS13	SUS316探頭	本體FC
備註	40W	一體型			1.5kW*2	一體型	7.5kW	一體型	18.5kW	一體型	18.5kW	一體型	3.7kW

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

巨和環保服務股份有限公司
Cnyx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局
Environmental Protection Bureau , Yilan County

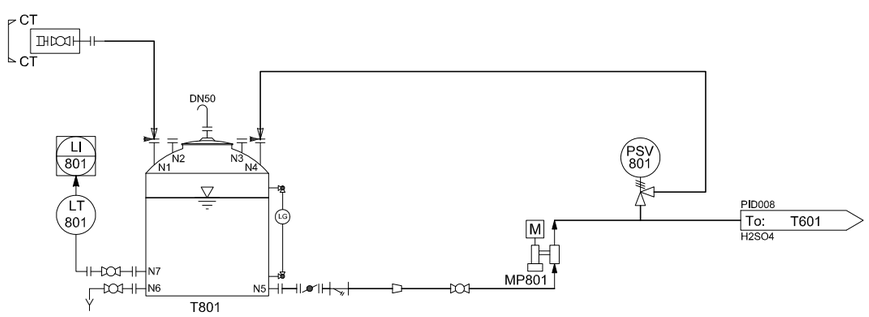
TITLE :

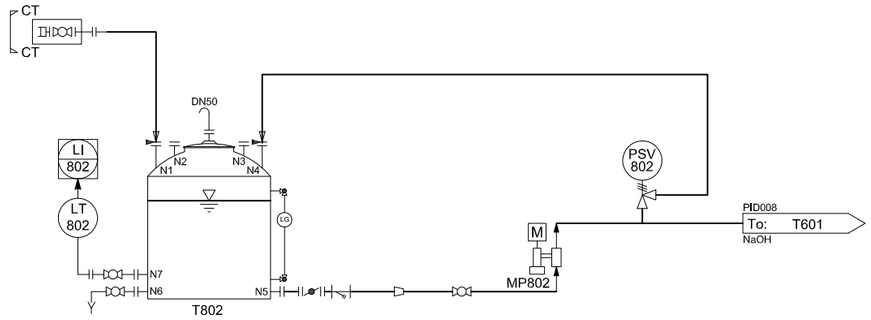
P&ID圖(八)

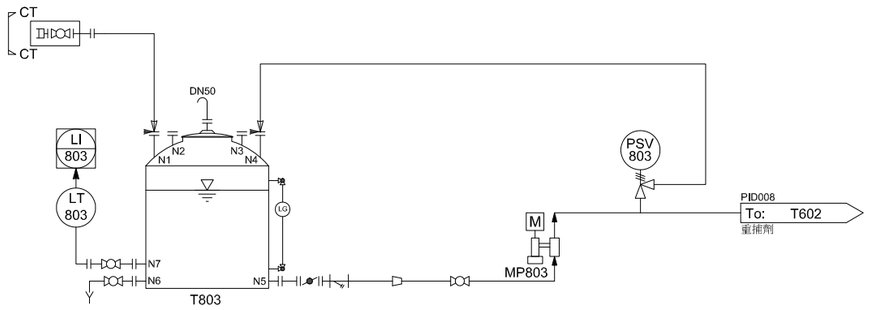
	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			I-108		

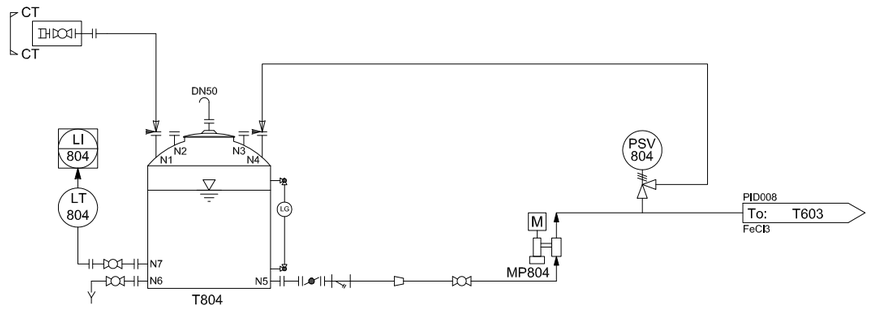
CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

JOB NO.









編號	T801	LIT801	MP801	PSV801	T802	LIT802	MP802	PSV802	T803
名稱	H_2SO_4儲槽	H_2SO_4儲槽液位計	H_2SO_4加藥機	H_2SO_4洩壓閥	NaOH儲槽	NaOH儲槽液位計	NaOH加藥機	NaOH洩壓閥	重捕劑儲槽
型式	立式PE桶	隔膜式側壓感應液位計	電動隔膜加藥機	自動卸壓閥	立式PE桶	隔膜式側壓感應液位計	電動隔膜加藥機	自動卸壓閥	立式PE桶
規格	$3m^3$	0-100%	2.2LPM x10kgf/cm^2		$3m^3$	0-100%	2.2LPM x10kgf/cm^2		$3m^3$
材質	PE		PVC加藥頭	PVC	PE		PVC加藥頭	PVC	PE
備註			0.18kW				0.18kW		

編號	T803	LIT803	MP803	PSV803	T804	LIT804	MP804	PSV804
名稱	重捕劑儲槽	重捕劑儲槽液位計	重捕劑加藥機	重捕劑洩壓閥	$FeCl_3$儲槽	$FeCl_3$儲槽液位計	$FeCl_3$加藥機	$FeCl_3$洩壓閥
型式	立式PE桶	隔膜式側壓感應液位計	電動隔膜加藥機	自動卸壓閥	立式PE桶	隔膜式側壓感應液位計	電動隔膜加藥機	自動卸壓閥
規格	$3m^3$	0-100%	2.2LPM x10kgf/cm^2		$3m^3$	0-100%	2.2LPM x10kgf/cm^2	
材質	PE		PVC加藥頭	PVC	PE		PVC加藥頭	PVC
備註			0.18kW				0.18kW	

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR		REPLACED BY
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			I-109		

TITLE :

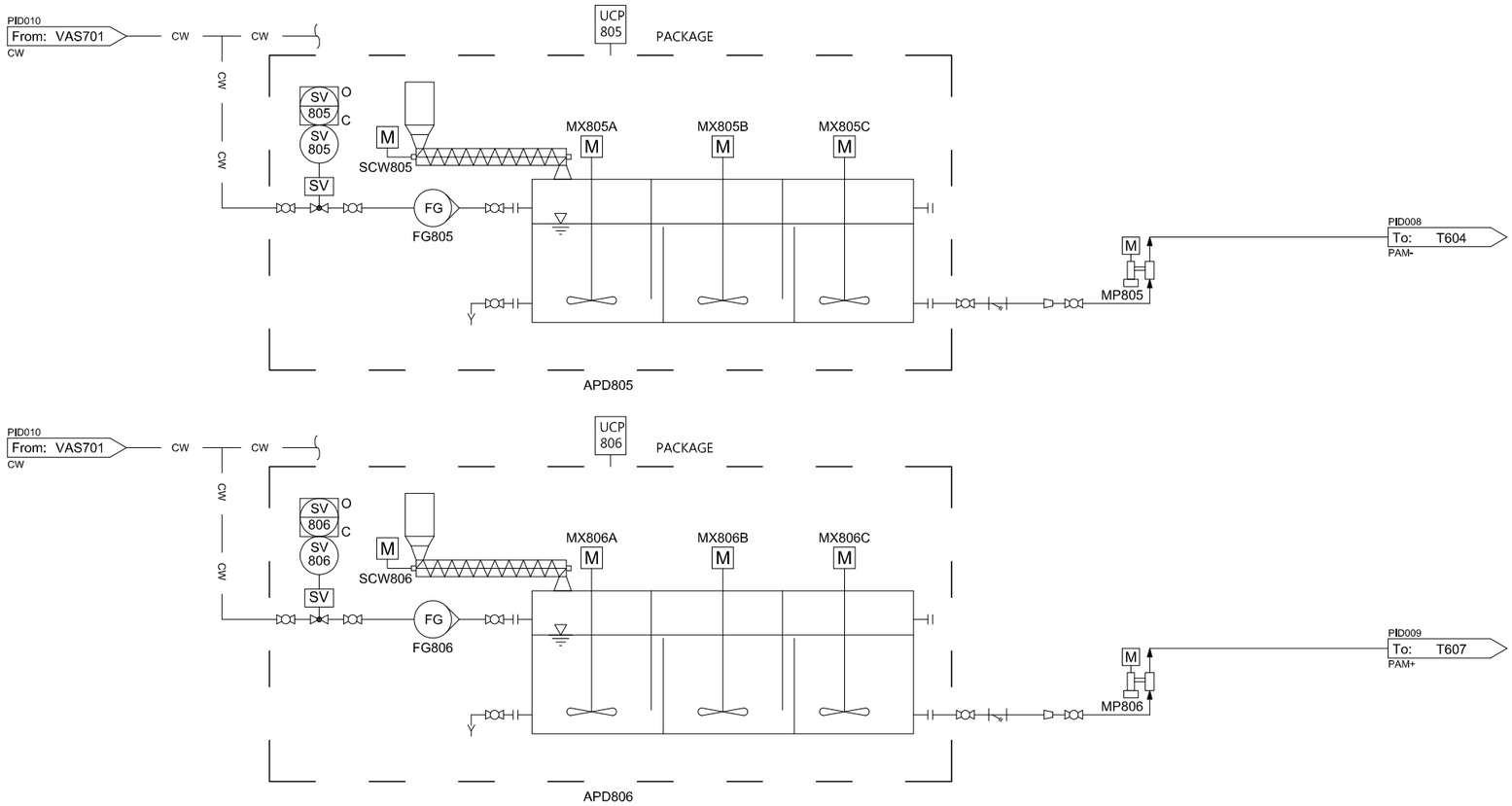
P&ID圖(九)

Onyx Ta-Ho Environmental Services Co., Ltd. 達和環保服務股份有限公司

宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

CENTURY ENVIRONTECH CO., LTD 松橋環保科技股份有限公司

JOB NO.



編號	APD805	MP805	APD806	MP806
名稱	PAM^- 自動泡藥機	PAM^- 加藥機	PAM^+ 自動泡藥機	PAM^+ 加藥機
型式	三槽式	電動隔膜加藥機	三槽式	電動隔膜加藥機
規格	500L/hr 套裝式設備	5.6LPM x5kgf/cm^2	500L/Hr 套裝式設備	1.1LPM x10kgf/cm^2
材質	本體SUS304	PVC加藥頭	本體SUS304	PVC加藥頭
備註	0.54kW	0.18kW	0.54kW	0.18kW

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

Cnyx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

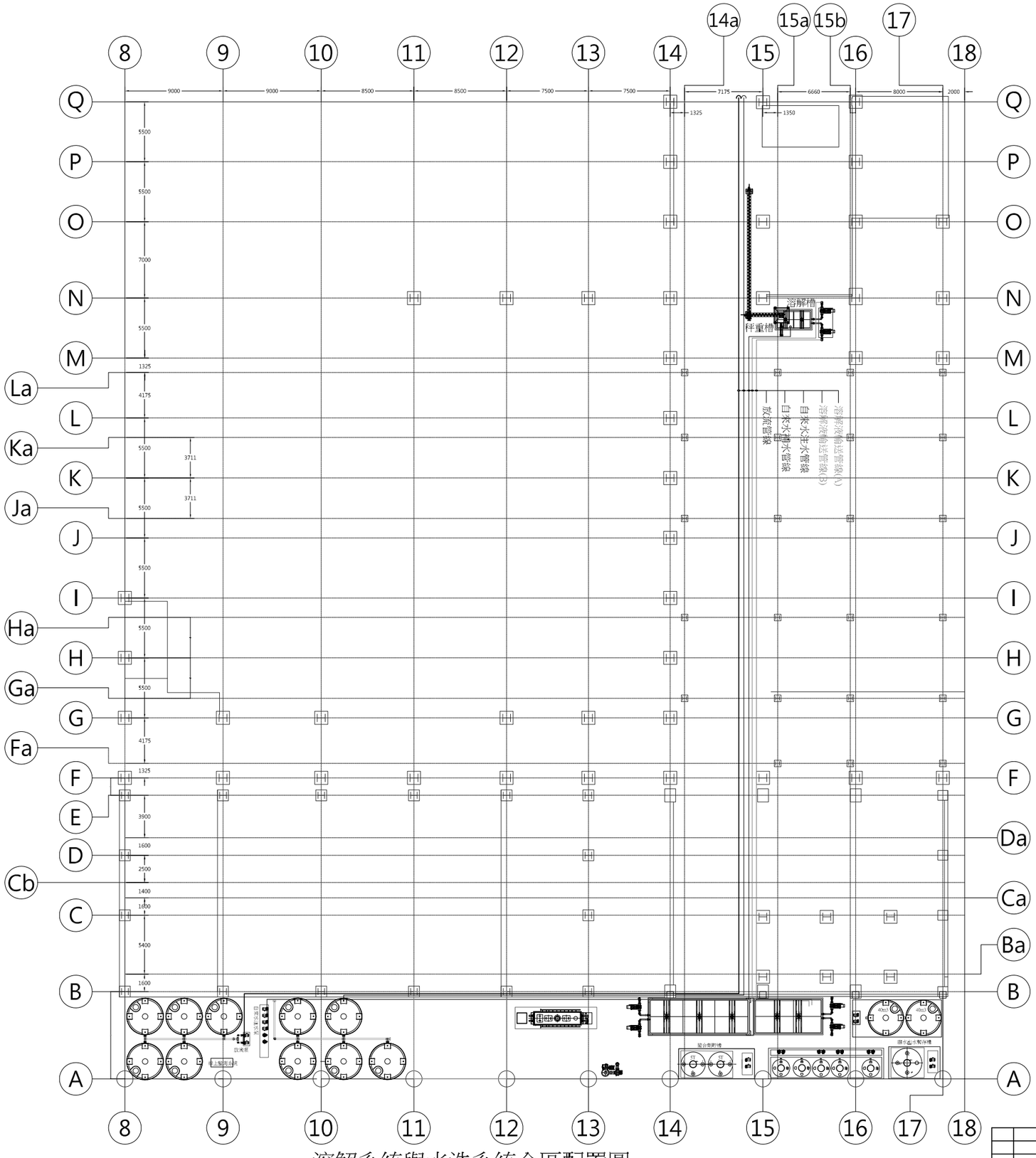
TITLE :

P&ID圖(十)

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			I-110		

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

JOB NO.



溶解系統與水洗系統全區配置圖

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

遠和環保服務股份有限公司
Onyx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局
Environmental Protection Bureau , Yilan County

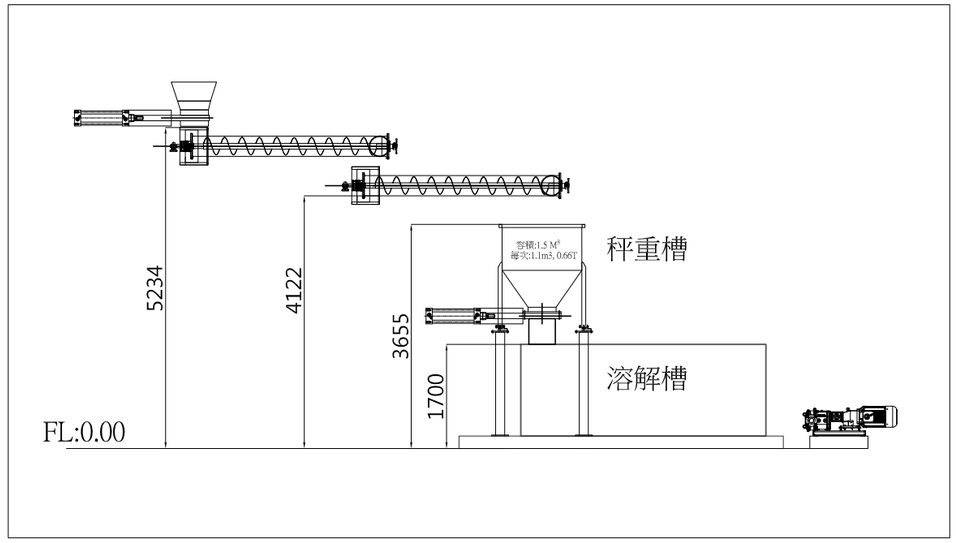
TITLE :

水洗系統全區配置圖

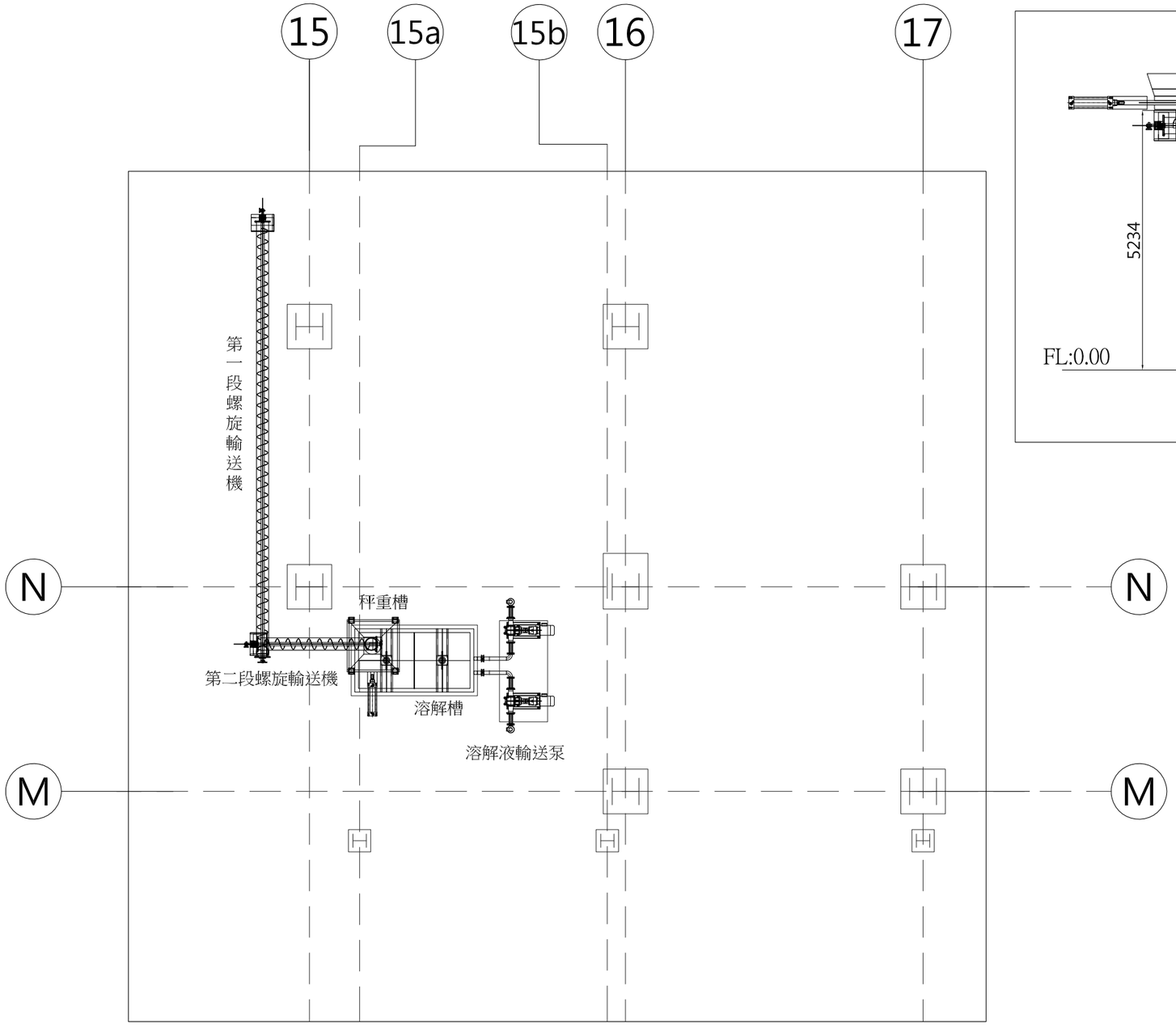
	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			P-001		

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

JOB NO.



飛灰輸送與溶解系統高程圖



飛灰輸送與溶解系統平面配置圖

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR		REPLACED BY
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			P-002		

鎧和環保服務股份有限公司 Onyx Ta-Ho Environmental Services Co., Ltd.

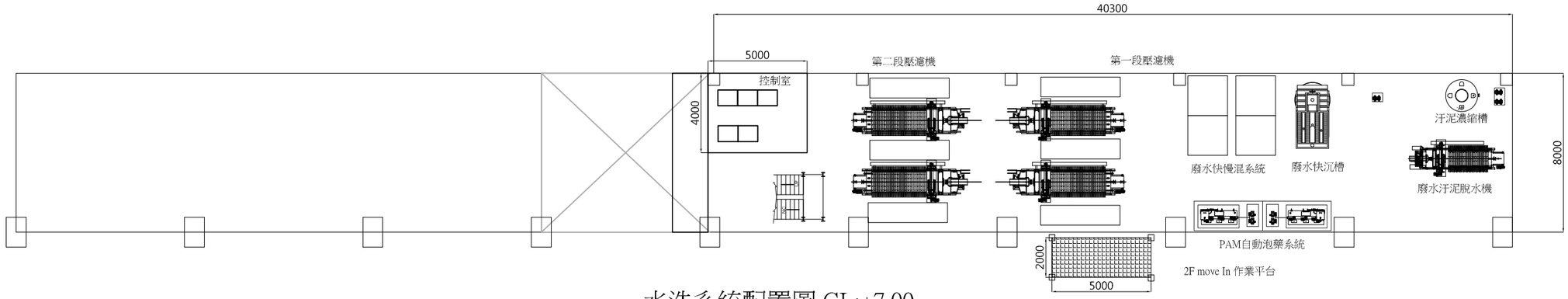
宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

TITLE :

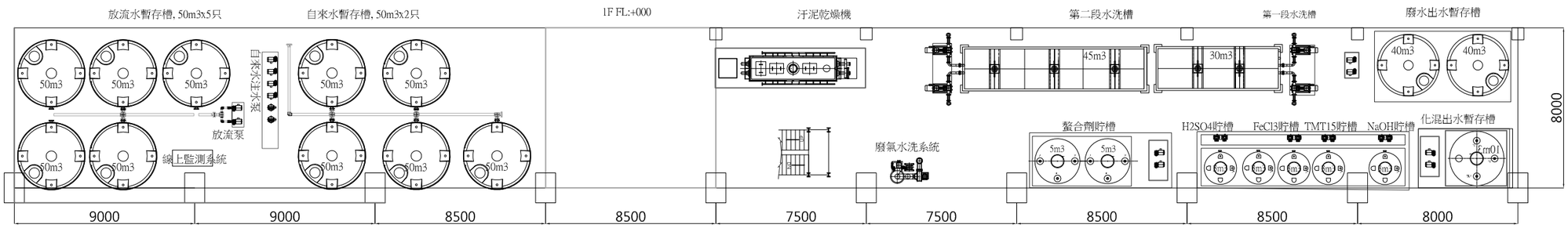
飛灰輸送與溶解區配置圖

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

JOB NO.



水洗系統配置圖 GL:+7.00

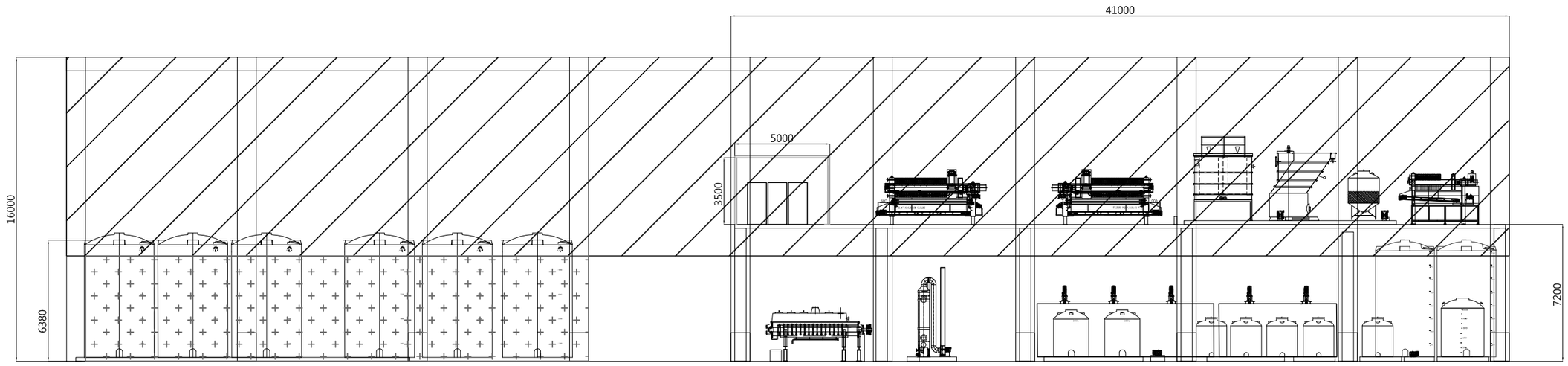


水洗系統配置圖 GL:+0.00

水洗系統平面配置圖

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

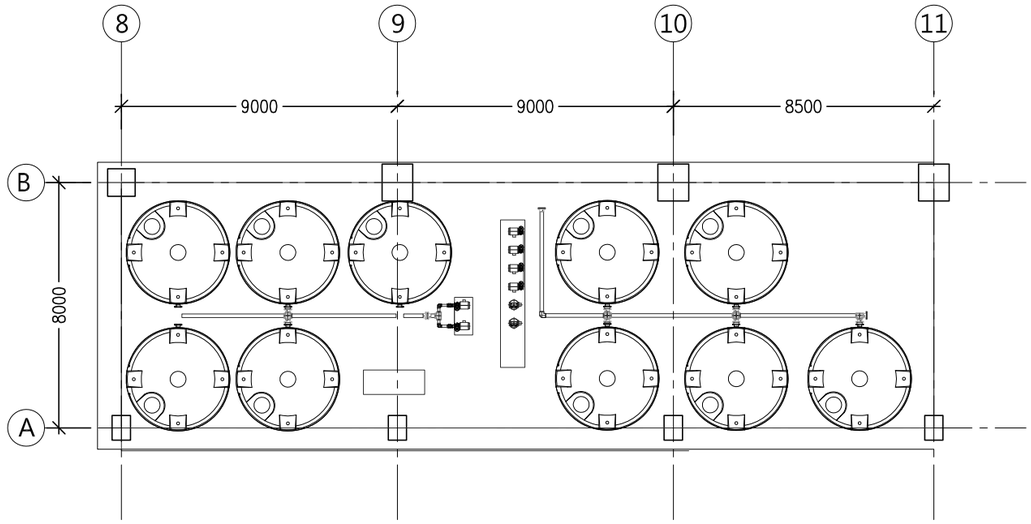
鎰和環保服務股份有限公司 Cnyx Ta-Ho Environmental Services Co., Ltd			宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County		
TITLE : 水洗系統平面配置圖					
	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			P-003		
CENTURY ENVIRONTECH CO., LTD 松橋環保科技股份有限公司			JOB NO.		

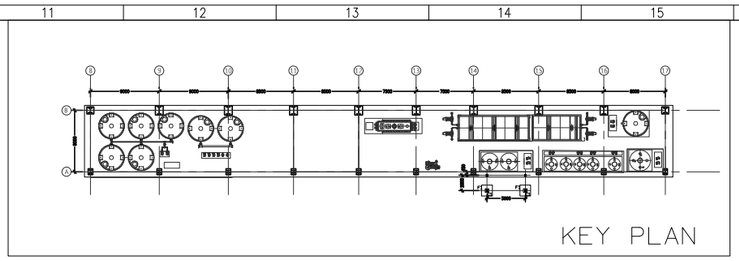


水洗系統立面圖

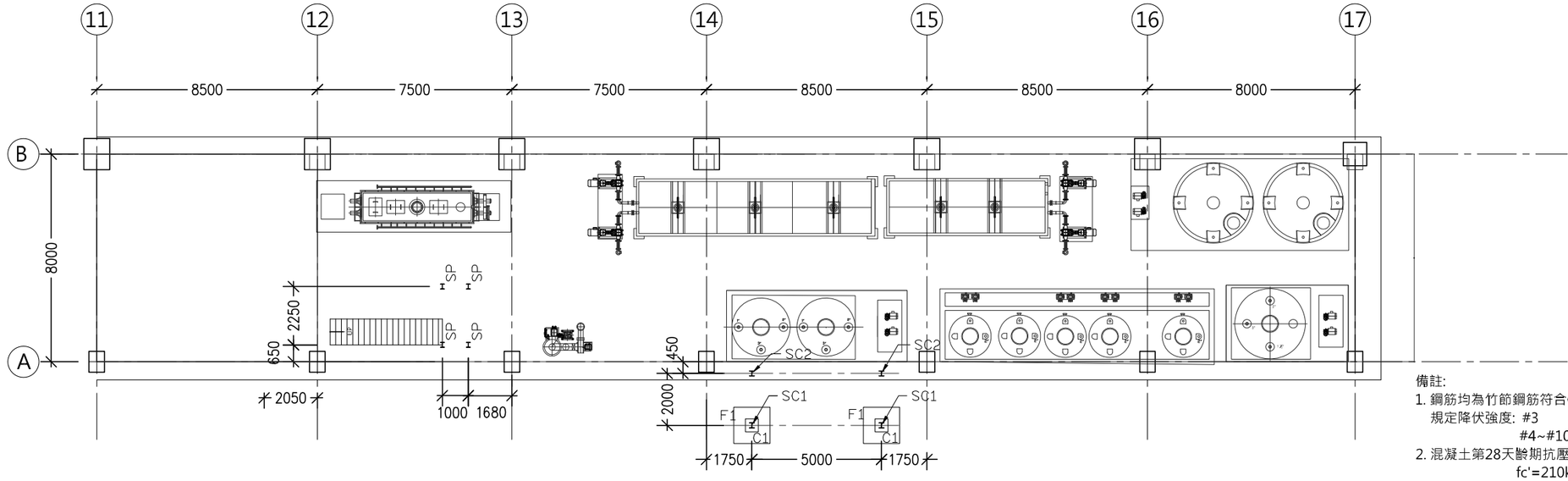
REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

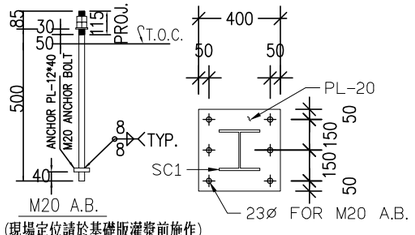
遠和環保服務股份有限公司 Cnyx Ta-Ho Environmental Services Co., Ltd			宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County		
TITLE : 水洗系統立面圖					
	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			P-004		
CENTURY ENVIRONTECH CO., LTD 松橋環保科技股份有限公司			JOB NO.		





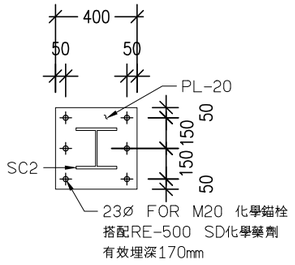
項目	斷面尺寸	材質
C1	500X500	RC
F1	1400X1400X400	RC
SC1，SC2	H200X200X8X12	SN490YB
SP	H194X150X6X9	SN400YB





SC1柱底板詳圖

S = 1:30

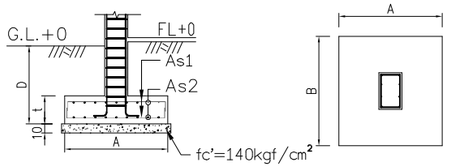


SC2柱底板詳圖

S = 1:30

1樓結構平面圖(T.O.F FL±0)

S = 1:200



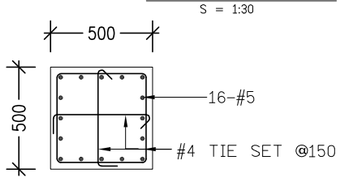
基礎編號	A	B	t	D(cm)	As1	As2
F1	140	140	40	150	#4@15	#4@15

註1：以上基礎設計之基礎承載力取10.0t/m^2做計算

註2：柱頭主筋需有標準彎鉤

F1基礎配筋圖

S = 1:10



C1詳圖

S = 1:30

表示剛接

表示簡接

備註:

1. 鋼筋均為竹節鋼筋符合CNS 560-A2006.
   規定降伏強度: #3 Fy=2800kgf/cm² SD280W
   #4~#10 Fy=4200kgf/cm² SD420W
2. 混凝土第28天齡期抗壓強度:
   fc'=210kgf/cm²
3. 本工程不得使用輻射鋼筋及海砂.
   砂符合:CNS 3090預拌混凝土
   CNS 1240混凝土粒料
   CNS 13407細料粒中水溶性氯離子含量試驗法.
4. 實際放樣尺寸,請參考各層建築結構平面圖.
5. 所有緊急避難入口,排煙口,通風口,管道間
   請參考各層建築結構平面圖.
6. 所有樓梯間牆及電梯間牆均以鋼筋混凝土施作.
7. 鋼柱及鋼梁採 SN400YB與SN490YB

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

亞和環保服務股份有限公司 Cnyx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

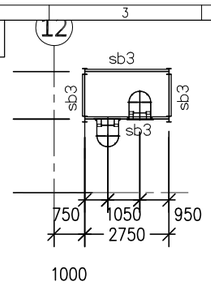
TITLE :

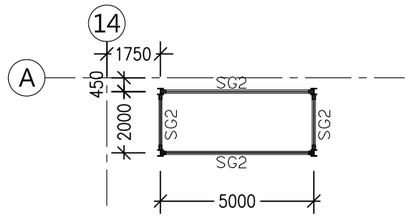
結構平面圖(一)

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			S-101		

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

JOB NO.

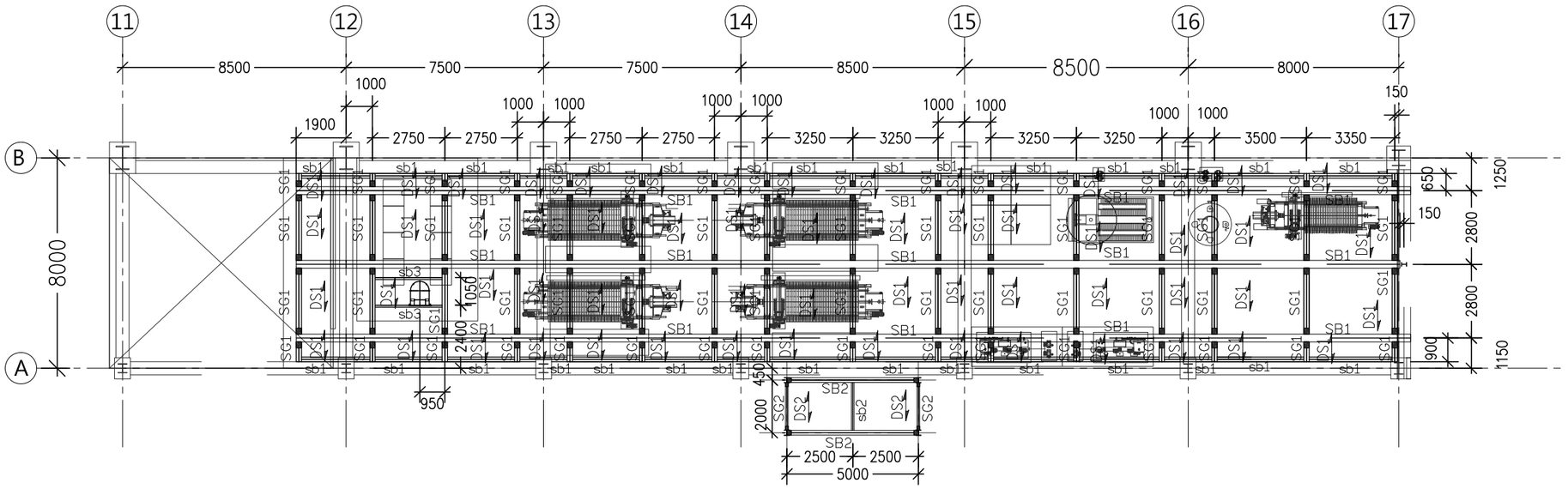




T.O.S FL+3500

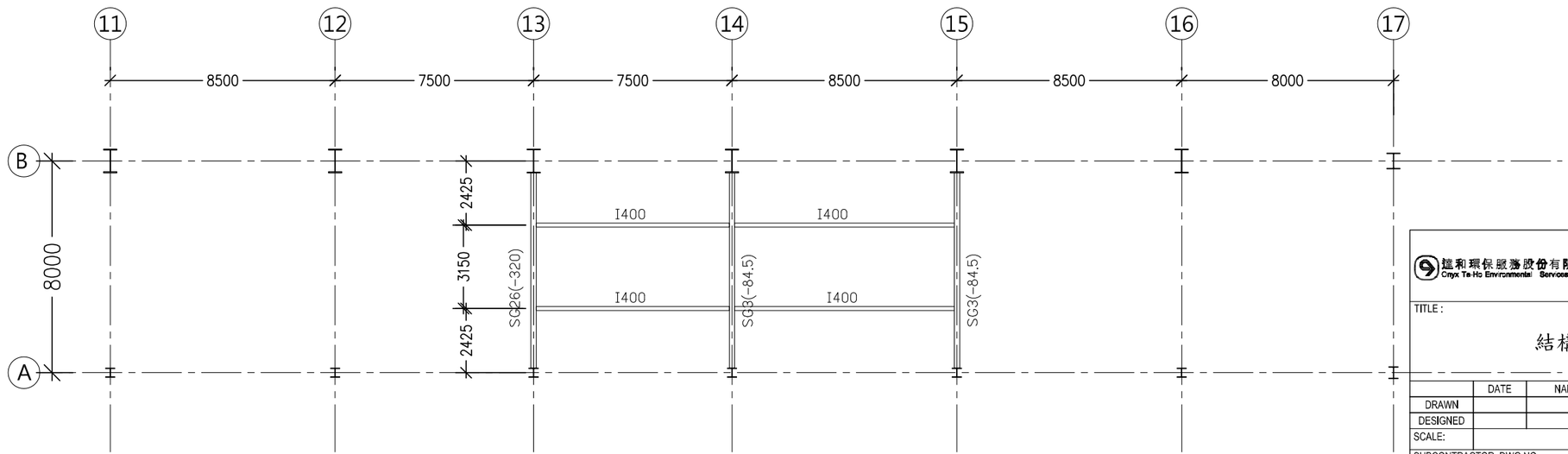
S = 1:200

項目	斷面尺寸	材質
SG1	H400X200X8X13	SN400YB
SG2、sb2	H200X100X5.5X8	SN400YB
SG3	H244X175X7X11	SN400YB
SG26	H500X200X10X16	SN400YB
SB1	H440X300X11X18	SN490YB
SB2	H244X175X7X11	SN490YB
sb1	H350X175X7X11	SN400YB
sb3	C180X75X7X10.5	A36
SP	H194X150X6X9	SN400YB
BR2	2L-90X90X7	A36
天車梁I400	I400X150X10X18	SN400YB
DS1	T=180mm	DECK版
DS2	T=150mm	DECK版



2樓結構平面圖(T.O.F FL+7000)

S = 1:200



3樓結構平面圖(T.O.F FL+14000)

S = 1:200

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

益和環保服務股份有限公司 Cnyx Te-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

TITLE :

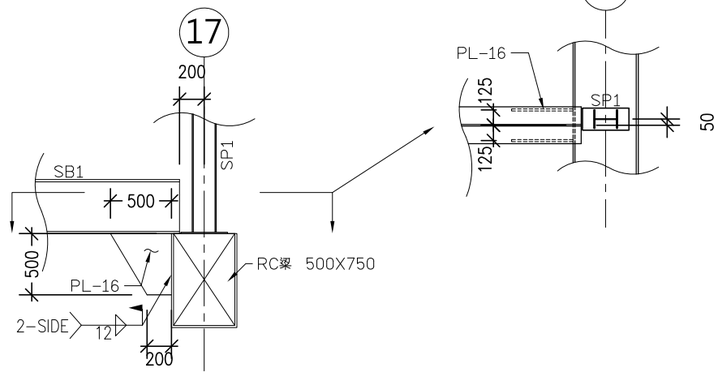
結構平面圖(二)

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			S-102		

CENTURY ENVIRONTECH CO., LTD 松橋環保科技股份有限公司

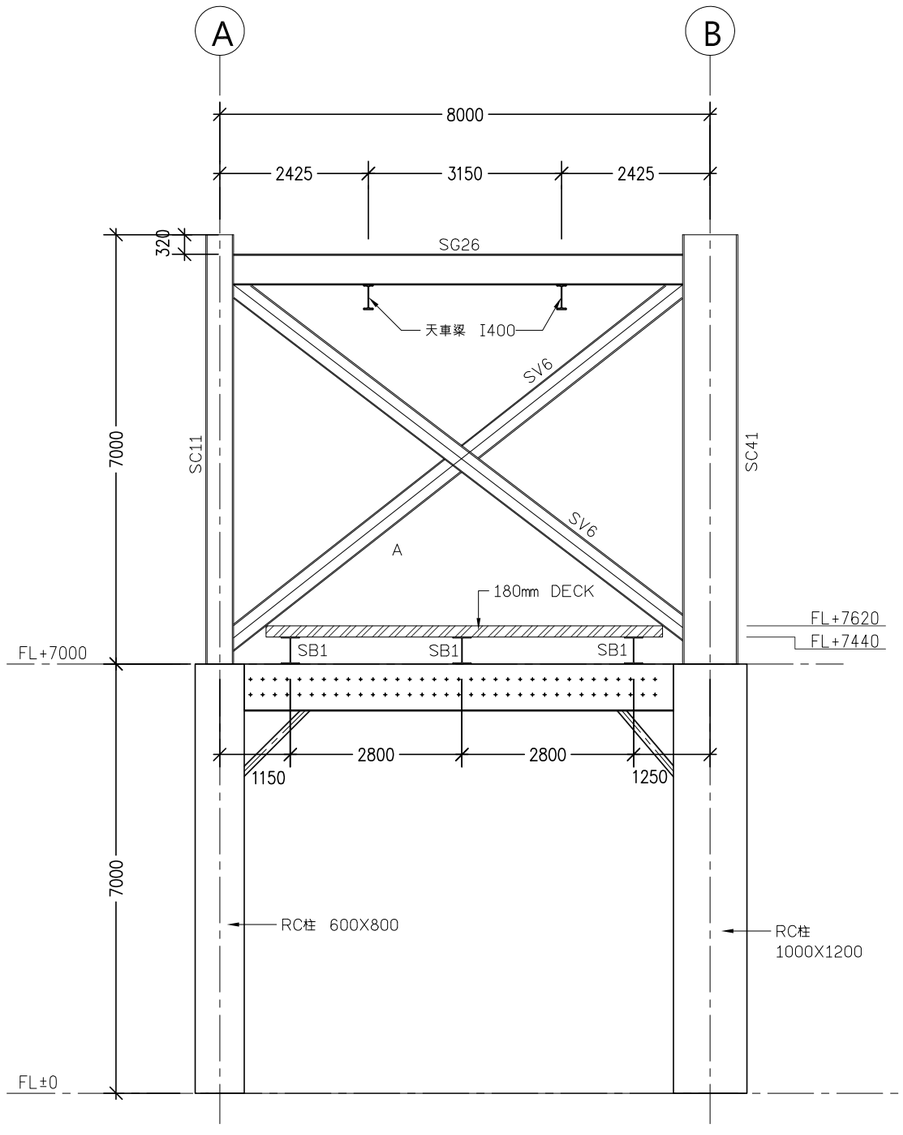
JOB NO.

項目	斷面尺寸	材質
SP1	H194X150X6X9	SM490A
SG12	H346X174X6X9	SM490A
SG26	H500X200X10X16	SM490A
SC11	H450X350X12X19	SM490A
SC19	H600X500X12X19	SM490A
SC41	BH900X500X19X25	SM490A
SV5	H300X300X10X15	SM490A
SV6	H350X350X12X19	SM490A
天車梁 I400	I400X150X10X18	SN490YB
SB1	H440X300X11X18	SN490YB



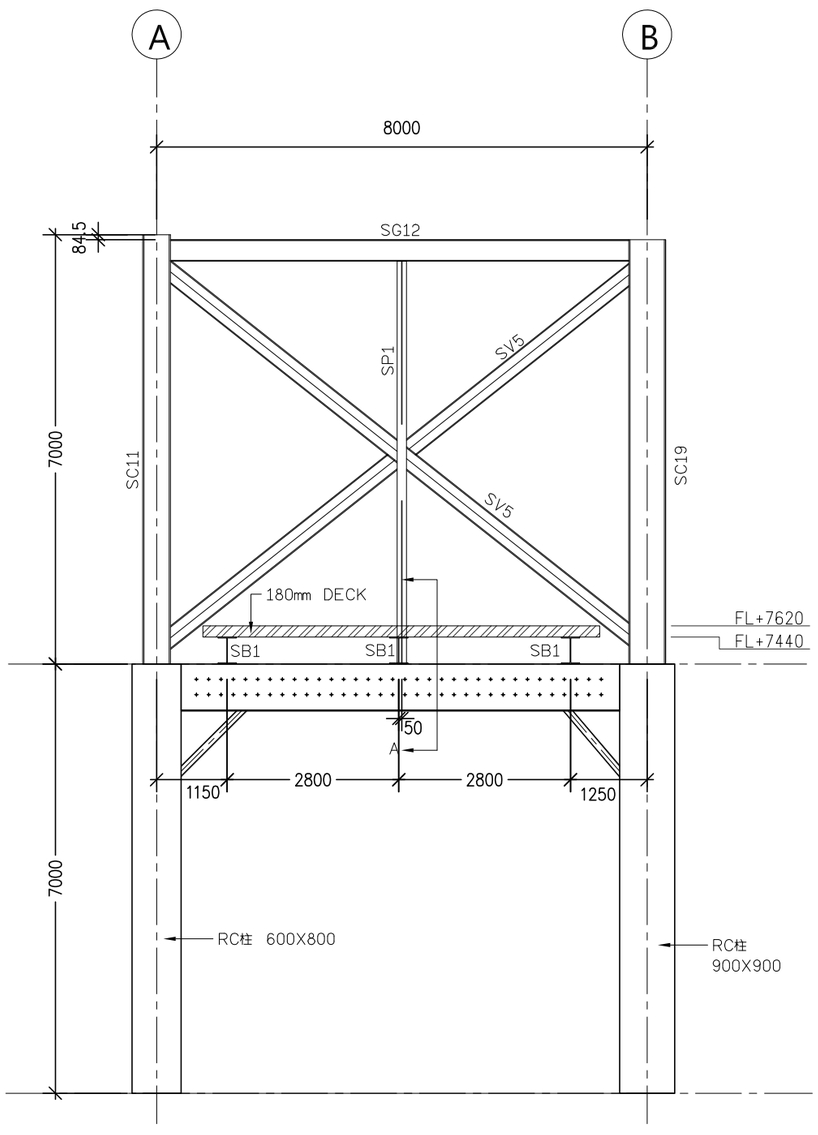
剖面圖 A-A

S = 1:50



柱線13立面圖

S = 1:100



柱線17立面圖

S = 1:100

註1:天車梁吊重2tf

註2:新設鋼樑與既有斜撐相對位置須依現場調整 。

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

亿和環保服務股份有限公司 Onyx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

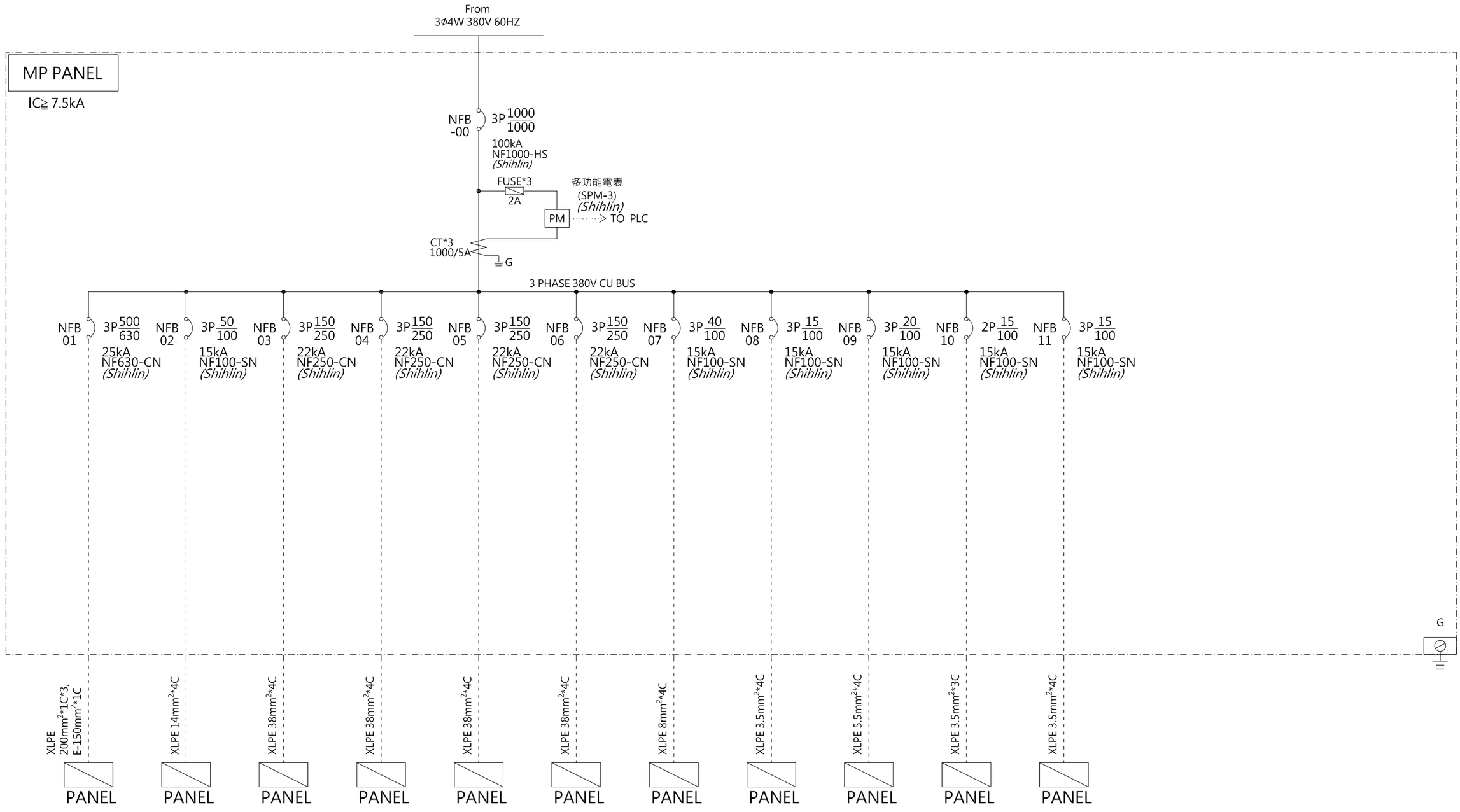
TITLE :

立面圖

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			S-201		

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

JOB NO.



負載編號 Load number	MP#NFB01	MP#NFB02	MP#NFB03	MP#NFB04	MP#NFB05	MP#NFB06	MP#NFB07	MP#NFB08	MP#NFB09	MP#NFB10	MP#NFB11
設備編號 Device number	MCP PANEL	DRY-401	FP-202A	FP-202B	FP-302A	FP-302B	FP-608	SCW-101A/B	CR-202A/B,302/AB	FZ-302	SCB-401
設備名稱 Device name	動力盤電源	濾餅乾燥機	第一段壓濾機A	第一段壓濾機B	第二段壓濾機A	第二段壓濾機B	污泥脫水機	套裝設備-秤重	破碎機	冷凍乾燥機	水洗塔
負載容量 Load capacity	161.59kW	15kW	37.5kW	37.5kW	37.5kW	37.5kW	11kW	4.4kW	6kW	0.55kW	3kW
電流(A) Current(A)	306	28.4	75	75	75	75	20	8.3	11.3	5.8	5.6
備註 Remark	-	-	-	-	-	-	-	-	-	1ø220V	-

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

益和環保服務股份有限公司 Cnyx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

TITLE :

電氣單線圖(一)

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			E-101		

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

JOB NO.

From MP PANEL
3ø3W 380V 60HZ

MCP-1~4
PANEL
IC≧7.5kA

NFB -00 3P 500/630 25kA NF630-CN *(Shihlin)*

3 PHASE 380V CU BUS

NFB 01	NFB 02	NFB 03	NFB 04	NFB 05	NFB 06	NFB 07	NFB 08	NFB 09	NFB 10	NFB 11	NFB 12	
3P ??/100	3P ??/100	3P 15/100	3P 15/100	3P 50/100	3P 50/100	3P 75/100	3P 75/100	3P 15/100	3P 15/100	3P 15/100	3P 15/100	
15kA NF100-SN *(Shihlin)*	15kA NF100-SN *(Shihlin)*	15kA NF100-SN *(Shihlin)*	15kA NF100-SN *(Shihlin)*	15kA NF100-SN *(Shihlin)*	15kA NF100-SN *(Shihlin)*	15kA NF100-SN *(Shihlin)*	15kA NF100-SN *(Shihlin)*	15kA NF100-SN *(Shihlin)*	15kA NF100-SN *(Shihlin)*	15kA NF100-SN *(Shihlin)*	15kA NF100-SN *(Shihlin)*	
FUSE 2A	FUSE 2A	FUSE 2A	FUSE 2A	FUSE 2A	FUSE 2A	FUSE 2A	FUSE 2A	FUSE 2A	FUSE 2A	FUSE 2A	FUSE 2A	
INV	INV	INV	INV	INV	INV	INV	INV	MS	MS	MS	MS	
F ON OFF CS (Y R G)	F ON OFF CS (Y R G)	F ON OFF CS (Y R G)	F ON OFF CS (Y R G)	F ON OFF CS (Y R G)	F ON OFF CS (Y R G)	F ON OFF CS (Y R G)	F ON OFF CS (Y R G)	F ON OFF CS (Y R G)	F ON OFF CS (Y R G)	F ON OFF CS (Y R G)	F ON OFF CS (Y R G)	
FRN2.2G2S-4J *(Fuji)*	FRN2.2G2S-4J *(Fuji)*	FRN2.2G2S-4J *(Fuji)*	FRN2.2G2S-4J *(Fuji)*	FRN15G2S-4J *(Fuji)*	FRN15G2S-4J *(Fuji)*	FRN22G2S-4J *(Fuji)*	FRN22G2S-4J *(Fuji)*	MSO-P12 OL:7~11A *(Shihlin)*	MSO-P12 OL:7~11A *(Shihlin)*	MSO-P12 OL:1.6~2.6A *(Shihlin)*	MSO-P12 OL:1.6~2.6A *(Shihlin)*	
XLPE 3.5mm²*4C	XLPE 3.5mm²*4C	XLPE 3.5mm²*4C	XLPE 3.5mm²*4C	XLPE 14mm²*4C	XLPE 14mm²*4C	XLPE 22mm²*4C	XLPE 22mm²*4C	XLPE 3.5mm²*4C	XLPE 3.5mm²*4C	XLPE 3.5mm²*4C	XLPE 3.5mm²*4C	
M 3~	M 3~	M 3~	M 3~	M 3~	M 3~	M 3~	M 3~	M 3~	M 3~	M 3~	M 3~	

A

B

C

G

負載編號 Load number	MCP#NFB01	MCP#NFB02	MCP#NFB03	MCP#NFB04	MCP#NFB05	MCP#NFB06	MCP#NFB07	MCP#NFB08	MCP#NFB09	MCP#NFB10	MCP#NFB11	MCP#NFB12
設備編號 Device number	SCW-101A	SCW101B	P-102A	P-102B	P-201A	P-201B	P-301A	P-301B	P-501A	P-501B	P-502A	P-502B
設備名稱 Device name	飛灰暫存出料機	秤重槽進料機	溶解槽轉送泵A	溶解槽轉送泵B	第一段壓濾機進流泵A	第一段壓濾機進流泵B	第二段壓濾激進流泵A	第二段壓濾激進流泵B	廢水系統進流泵A	廢水系統進流泵B	螯合劑轉送泵A	螯合劑轉送泵B
負載容量 Load capacity	3.7kW	2.2kW	2.2kW	2.2kW	15kW	15kW	22kW	22kW	3.7kW	3.7kW	0.75kW	0.75kW
電流(A) Current(A)	7.0200	4.1700	4.17	4.17	28.4	28.4	41.7	41.7	7.02	7.02	1.42	1.42
備註 Remark		-	-	-	-	-	-	-	-	-	-	-

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

鏈和環保服務股份有限公司 Cryx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

TITLE :

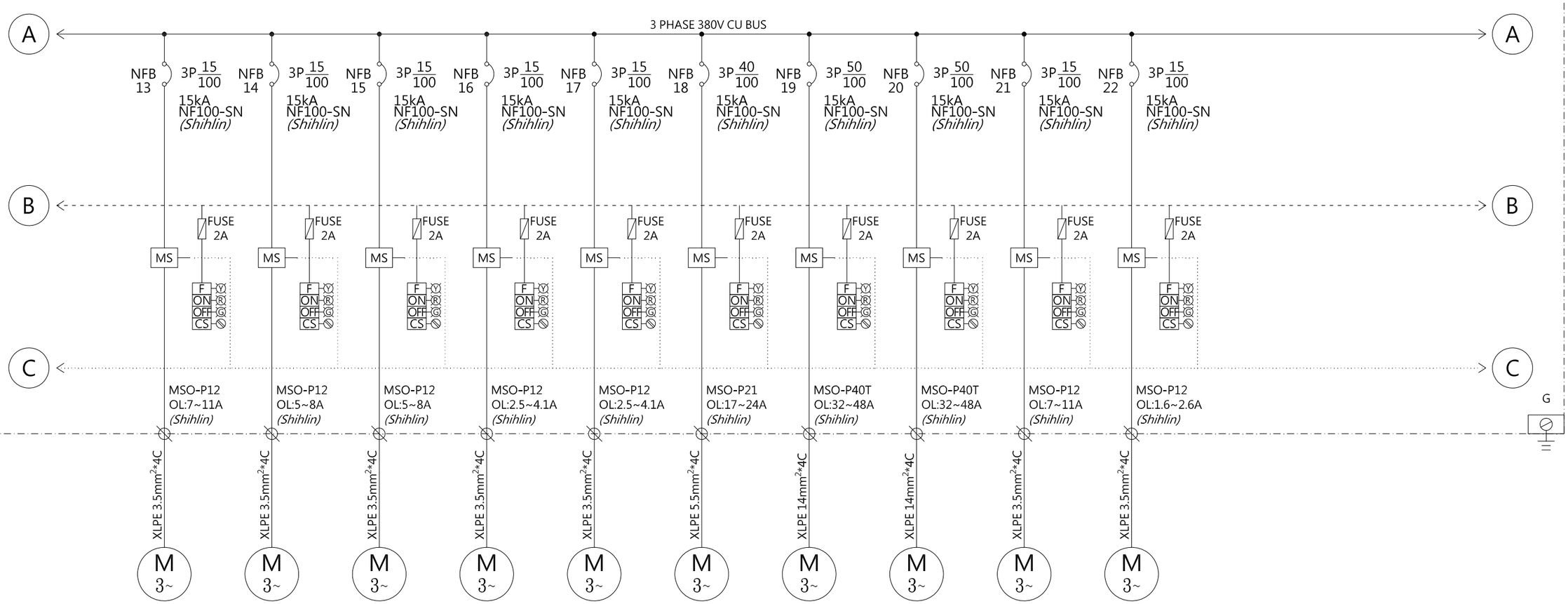
電氣單線圖(二)

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			E-102		

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

JOB NO.

MCP-1~4
PANEL
IC≧7.5kA



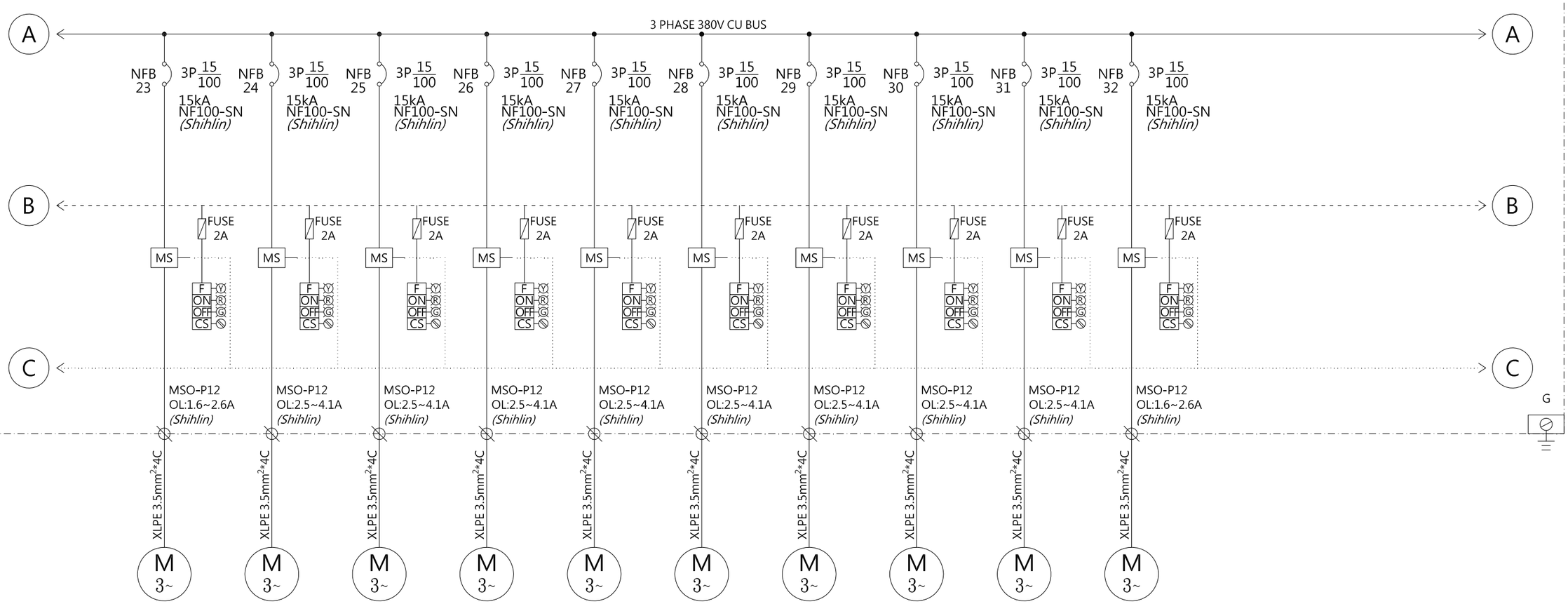
負載編號 Load number	MCP#NFB13	MCP#NFB14	MCP#NFB15	MCP#NFB16	MCP#NFB17	MCP#NFB18	MCP#NFB19	MCP#NFB20	MCP#NFB21	MCP#NFB22
設備編號 Device number	P-606	P-607A	P-607B	P-701A	P-701B	P-701C	P-701D	P-701E	VAS-701	MX-102A
設備名稱 Device name	化混出水槽轉送泵	放流泵A	放流泵B	溶解槽注水泵A	溶解槽注水泵B	第二段水洗槽注水泵	第一段壓濾機清洗泵	第二段壓濾機清洗泵	廠區自來水加壓泵	溶解槽攪拌機A
負載容量 Load capacity	3.7kW	2.2kW	2.2kW	1.5kW	1.5kW	7.5kW	18.5kW	18.5kW	3.7kW	0.75kW
電流(A) Current(A)	7.02	4.17	4.17	2.84	2.84	14.2	35.1	35.1	7.02	1.42
備註 Remark	-	-	-	-	-	-	-	-	-	-

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

- 213 -

德和環保服務股份有限公司 Onyx Te-Ho Environmental Services Co., Ltd.			宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County		
TITLE : 電氣單線圖(三)					
	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR	REPLACED BY	
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO. E-103		REV.
CENTURY ENVIRONTECH CO., LTD 松橋環保科技股份有限公司			JOB NO.		

MCP-1~4
PANEL
IC≧7.5kA



負載編號 Load number	MCP#NFB23	MCP#NFB24	MCP#NFB25	MCP#NFB26	MCP#NFB27	MCP#NFB28	MCP#NFB29	MCP#NFB30	MCP#NFB31	MCP#NFB32
設備編號 Device number	MX-102B	MX-201A	MX-201B	MX-301A	MX-301B	MX-301C	MX-601	MX-602	MX-603	MX-604
設備名稱 Device name	溶解槽攪拌機B	第一段水洗攪拌機A	第一段水洗攪拌機B	第二段水洗槽攪拌機A	第二段水洗槽攪拌機B	第二段水洗槽攪拌機C	pH調整槽攪拌機	重捕槽攪拌機	快混槽攪拌機	膠凝槽攪拌機
負載容量 Load capacity	0.75kW	1.5kW	1.5kW	1.5kW	1.5kW	1.5kW	1.5kW	1.5kW	1.5kW	0.75kW
電流(A) Current(A)	1.42	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	1.42
備註 Remark	-	-	-	-	-	-	-	-	-	-

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

遠和環保服務股份有限公司 Onyx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

TITLE :

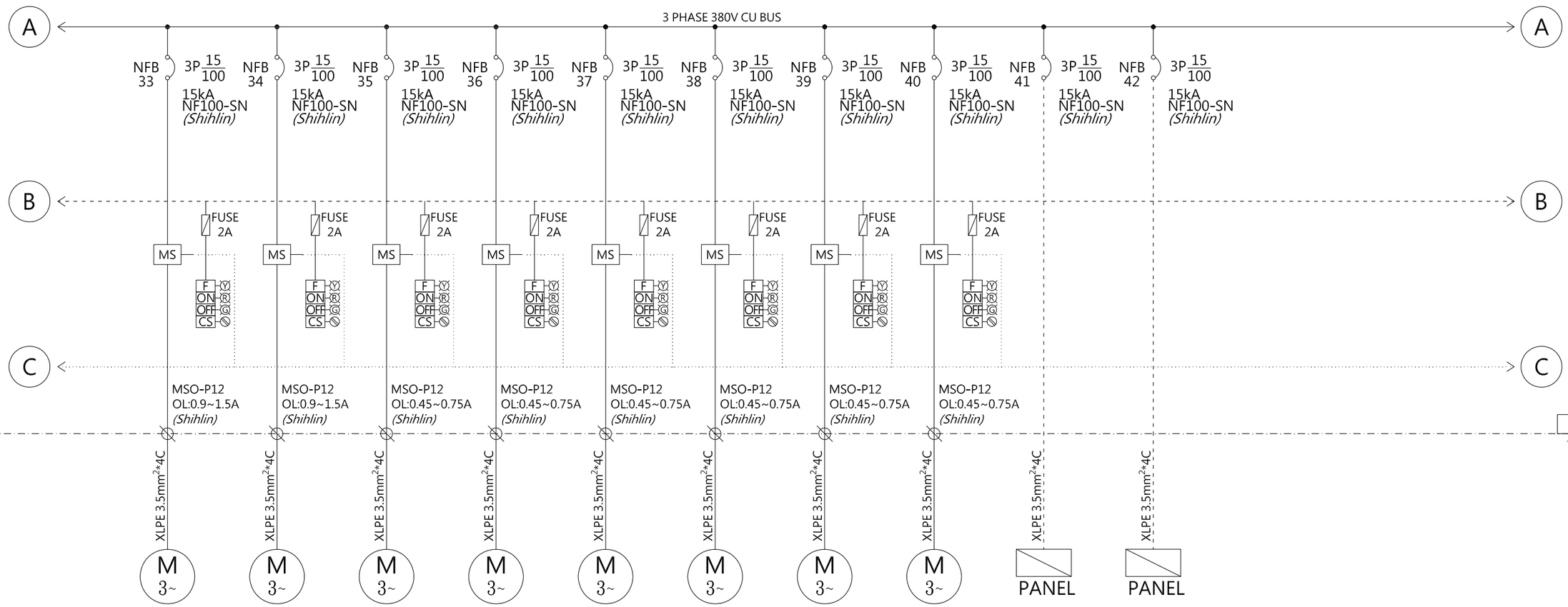
電氣單線圖(四)

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR		REPLACED BY
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			E-104		

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

JOB NO.

MCP-1~4
PANEL
IC≧7.5kA



負載編號 Load number	MCP#NFB33	MCP#NFB34	MCP#NFB35	MCP#NFB36	MCP#NFB37	MCP#NFB38	MCP#NFB39	MCP#NFB40	MCP#NFB41	MCP#NFB42
設備編號 Device number	MX-608	SCR-605	MP-801	MP-802	MP-803	MP-804	MP-805A	MP-805B	APD-805	APD-806
設備名稱 Device name	攪泥機	快沉槽刮泥機	H2SO4加藥機	NaOH加藥機	重捕劑加藥機	FeCl3加藥機	PAM-加藥機	PAM+加藥機	PAM-自動泡藥機	PAM+自動泡藥機
負載容量 Load capacity	0.37kW	0.37kW	0.18kW	0.18kW	0.18kW	0.18kW	0.18kW	0.18kW	1.5kW	1.5kW
電流(A) Current(A)	0.7	0.7	0.34	0.34	0.34	0.34	0.34	0.34	2.84	2.84
備註 Remark	-	-	-	-	-	-	-	-	-	-

REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

鎧和環保服務股份有限公司 Onyx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局 Environmental Protection Bureau , Yilan County

TITLE :

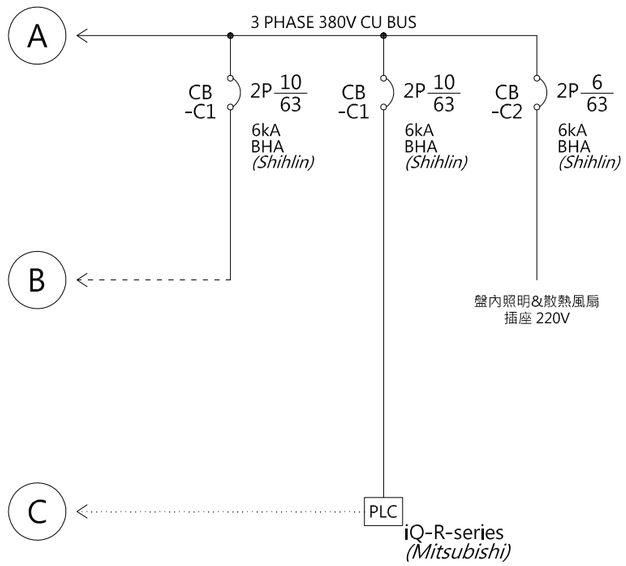
電氣單線圖(五)

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR		REPLACED BY
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			E-105		

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

JOB NO.

CP
PANEL
IC≧7.5kA



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REV.	DATE	DRW.	CKD.	APP.	DESCRIPTION

	DATE	NAME		DATE	NAME
DRAWN			CHECKED		
DESIGNED			APPROVED		
SCALE:			SUBSTITUE FOR		REPLACED BY
SUBCONTRACTOR DWG.NO.		REV.	DWG. NO.		REV.
			E-106		

遠和環保服務股份有限公司
Onyx Ta-Ho Environmental Services Co., Ltd.

宜蘭縣政府環境保護局
Environmental Protection Bureau , Yilan County

TITLE :

電氣單線圖(六)

CENTURY ENVIRONTECH CO., LTD
松橋環保科技股份有限公司

JOB NO.