

Box 3/3

1001-WW
TAIKO

MESSRS.

HIGAKI SHIPBUILDING CO.,LTD.

WORK No.

S.No. 552

~~納入仕様書~~
~~SPECIFICATIONS OF SUPPLY~~

SEWAGE TREATMENT UNIT

TYPE : SBT-25

~~工事用図~~
~~WORKING DWG.~~

完成図
FINISHED DWG.

大晃機械工業株式会社



APPROVED BY Y. Yamada

CHECKED BY T. Miura

DESIGNED BY K. Takeuchi

DRAWN BY H. Miyamoto

ORDER No.

S8-1418

DATE OF DWG.

2002/9/3

DATE OF ISSUE DWG. No.

TAIKO KIKAI INDUSTRIES CO.,LTD.

YAMAGUCHI JAPAN

TEL(0820)52-3117 FAX (0820)53-1002

MM-1001

TAIKO SHIP-CLEAN SEWAGE TREATMENT UNIT SPECIFICATION

Ship Owner					
Shipyard	HIGAKI SHIPBUILDING CO.,LTD.			Ship No.	552
Work No.	S8-1418	Type	SBT-25	Quantity	1 set / ship
Source	AC440V×60Hz×3 φ				
Name Plate	English	Caution plate	English & Japanese		
Outside Painting	Anti-corrosive paint 2 coats & Finish paint 1 coat.				
	Color Munsell No. 2.5G7/2				
Discharge Method					
Rate Number of Persons		Maximum 25 persons / day			
Sewage BOD Volume		13.5 g / person · day			
Sewage Volume		60 L / person · day			
Biochemical Oxygen Demand (BOD)		Maximum 50 ppm			
Suspended Solid (SS)		Maximum 50 ppm			
Coliform		Maximum 200 / 100 mL			
Treatment Tank					
Main Materials	Mild Steel, Steel Pipe, Stainless Steel Pipe, Vinyl Pipe				
Inside Surface	Tar-epoxy coating				
Hydraulic Test Press.	2.5 m water head from the tank top				
Discharge Pump					
Type	CR-50S	Quantity	1 set / unit		
Capacity	4 m ³ / h × 20 m	Bore	50A × 40A		
Motor	1.5 kW × 2 P	Quantity	1 set / unit		
	Maker supply				
Aeration Blower					
Type	TSS-32	Quantity	1 set / unit		
Capacity	370 L / min × 0.02 MPa	Bore	32A		
Motor	0.4 kW × 4 P	Quantity	1 set / unit		
	Maker supply				
Accessories	Refer to the Parts List				
Spares	Refer to the Parts List				
Remarks					
<p>This device is used for Black Water only. Hospital waste water (Except chemical & Disinfectant) can be flow in this device. In the case of USCG, this sewage treatment unit is produced for UN-INSPECTED VESSEL.</p>					

U.S. Department
of Transportation

United States
Coast Guard



Commandant
United States Coast Guard

2100 Second Street, S. W.
Washington, DC 20593-0001
Staff Symbol: G-MSE-3
Phone: (202) 267-2206
FAX: (202) 267-4816

16714/159.015/Takai Kikai
April 1, 1999

Taiko Kikai Industries Co., Ltd.
209 Shimotabuse, Tabuse-cho,
Kumage-gun, Yamaguchi Pref.
JAPAN 742-1598

Gentlemen:

We have reviewed your letter of March 29, 1999, requesting recertification of your Marine Sanitation Device (MSD) test device's. Given no modifications have been made, the MSD test devices continue to meet the requirements of Title 33, Code of Federal Regulations (CFR), Part 159 and in accordance with 33 CFR 159.16, are recertified.

<u>Model</u>	<u>Capacity</u>	<u>Certification No.</u>	<u>Certified for</u>
SBT-15	900 LPD	159.015/3228/0	Uninspected Vessels
SBT-25	1500 LPD	159.015/3229/0	Uninspected Vessels
SBT-40	2400 LPD	159.015/3230/0	Uninspected Vessels
SBT-65	3900 LPD	159.015/3231/0	Uninspected Vessels

This certification remains valid for five years from May 31, 1999, unless we suspend, withdraw, or terminate it. Only the manufacturer of the MSD test device may apply for this certification to be extended by writing to the Commandant (G-MSE-3) before it expires. If the MSD is no longer produced and thus terminated, the MSD test device continues to be considered certified based on the MSD test device date of manufacture, the vessel installation date, and a valid certification for that time period. You cannot transfer this certification to another manufacturer without written authorization from the Commandant (G-MSE-3). You must notify the Commandant in writing when you make any change in the design or construction of these devices or when you cease manufacturing these devices.

If you have any further questions, please do not hesitate to contact LT Manning at (202) 267-6640.

Sincerely,

A handwritten signature in black ink that reads "P.A. Richardson".

P. A. RICHARDSON
Captain, U. S. Coast Guard
Chief, Systems Engineering Division
Office of Design and Engineering Standards
By direction of the Commandant

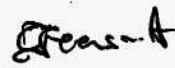
EC TYPE EXAMINATION CERTIFICATE

This is to certify that :

LLOYD'S REGISTER OF SHIPPING, designated as a "notified body" under Article 9 of Council Directive 96/98/EC on Marine Equipment, did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with the essential Marine-pollution prevention requirements of the Marine Equipment Directive subject to any conditions in the Design Appraisal Document attached hereto.

Producer Taiko Kikai Industries Co. Ltd
Address 09-1 Shimotabuse
Tabuse-cho
Kumage-gun
Yamaguchi-pref
Japan
Product Description SBT-25
Product Type SEWAGE TREATMENT PLANT
Specified Standard MEPC.2(VI)

The attached Design Appraisal Document forms part of this certificate.
This certificate remains valid unless cancelled or revoked, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

Date of issue 1 January 1999 **Issued by** Lloyd's Register of Shipping, London
LR EC Distinguishing No. 0038
Expiry date 31 December 2003
Certificate No MED 9950055 **Signed** 
Sheet No 1 of 2 **Name** G.J. Greensmith

Note:

This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify the nominated body named on this certificate of any modification or changes to the equipment in order to obtain a valid Certificate.

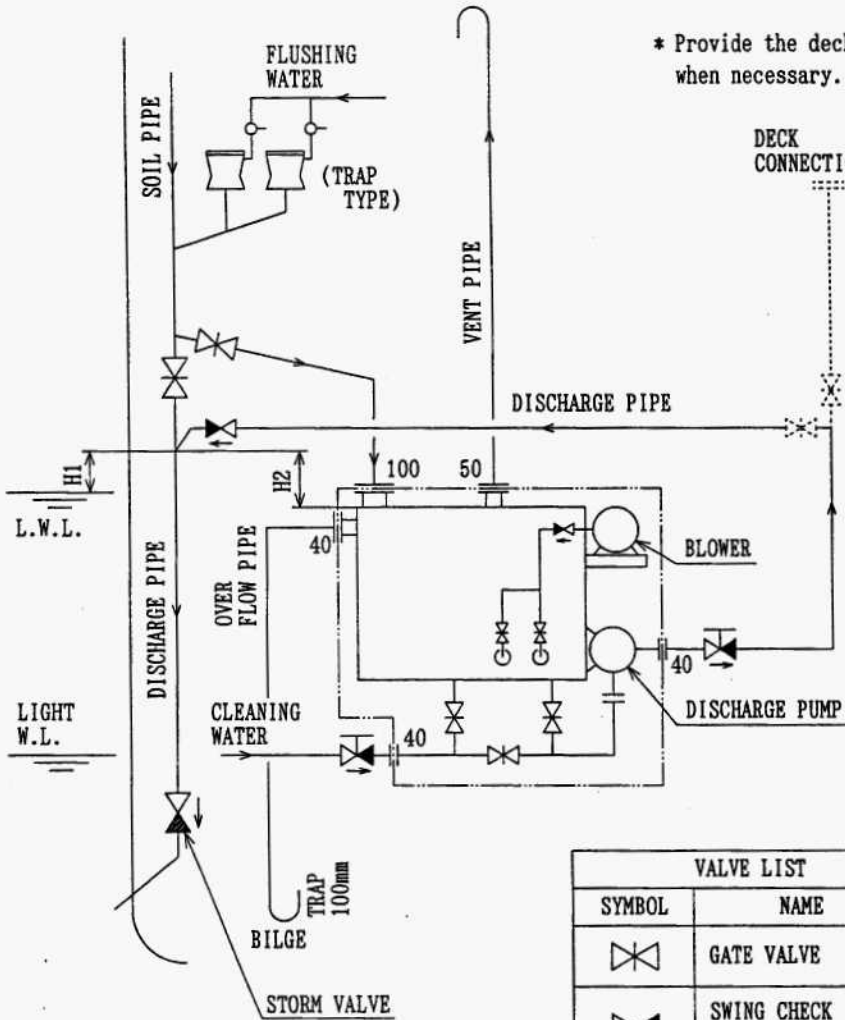


Maritime and Coastguard Agency
An Executive Agency of the Department of the
Environment, Transport and the Regions

This certificate is issued under the authority
of the MCA.



NOTICE - This certificate is subject to the terms and conditions overleaf, which form part of this certificate.



* Provide the deck connection piping when necessary.

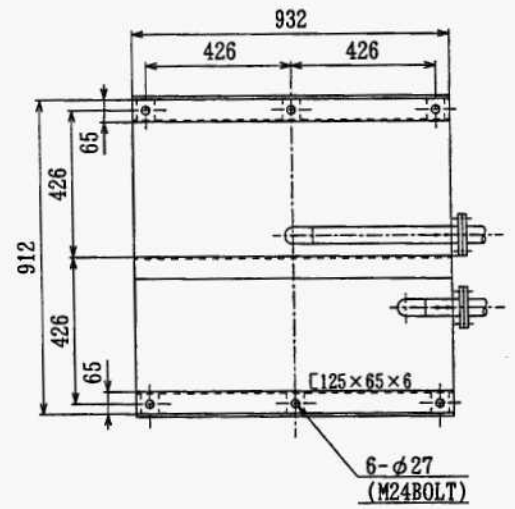
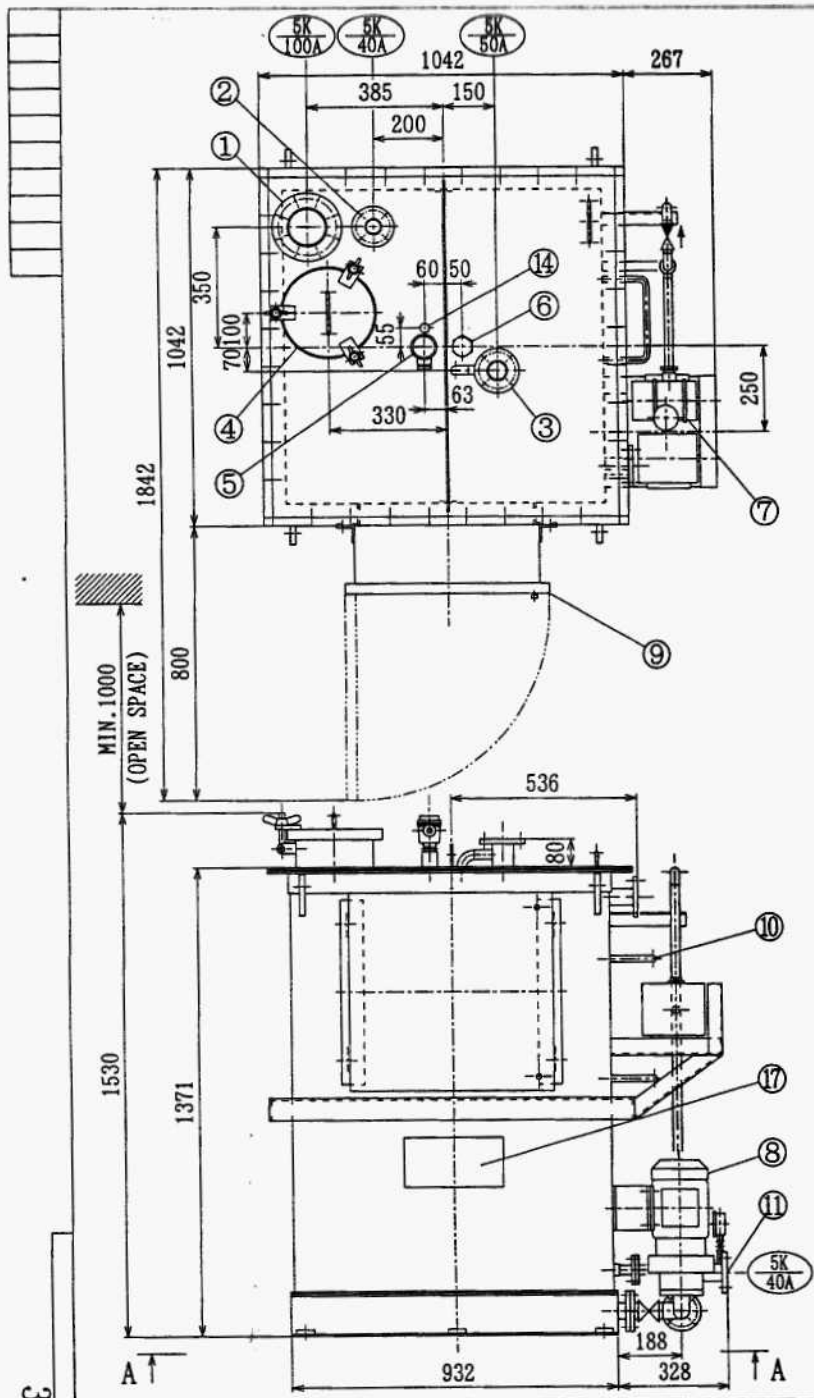
NOTES

1. "H1" should be made higher than the L.W.L..
2. "H2" should be made higher than the top of the tank.
3. The vent pipe of the unit should be installed with a slope to avoid blocking the piping by the condensed water.
4. The vent pipe should be piped to a place where the air is not still, and the top of the pipe should be bent downward.
5. Pay attention to the piping so that water will not flow back from the sea into the tank.
6. Overflow pipe should be led to bilge or other tank. It must not discharge overboard where USCG regulations are adopted.

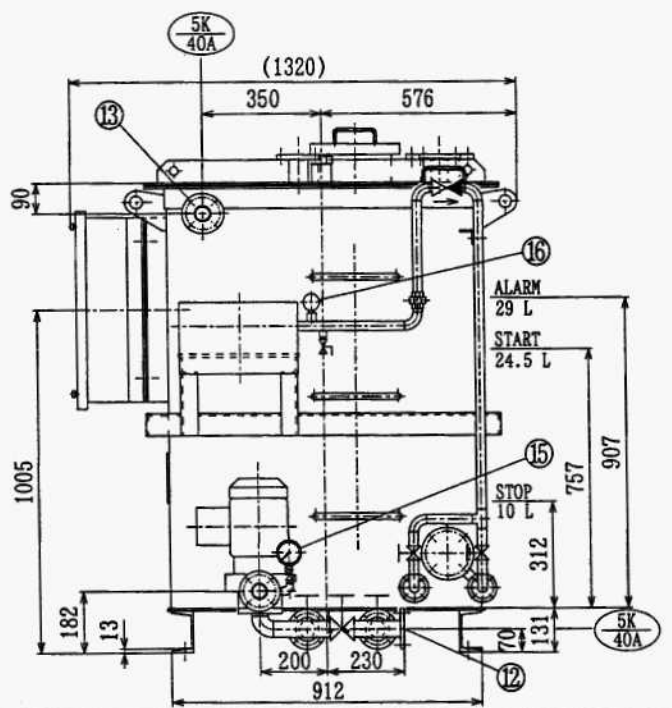
MAKER SUPPLY

VALVE LIST	
SYMBOL	NAME
	GATE VALVE
	SWING CHECK VALVE
	SCREW DOWN CHECK GLOBE VALVE

型式 TYPE	SBT-25	承認 APPROVED BY	Y. YAMADA
名稱 NAME	PIPING DIAGRAM	檢閱 CHECKED BY	T. MIURA
		設計 DESIGNED BY	
		製圖 DRAWN BY	K. TAKEUCHI
尺度 SCALE	—	大晃工番 TAIKO KIKAI W.No.	
日付 DATE	2001.12.14	圖番 DRAWING No.	SBT-25001
TAIKO KIKAI INDUSTRIES CO., LTD.			



A-A VIEW



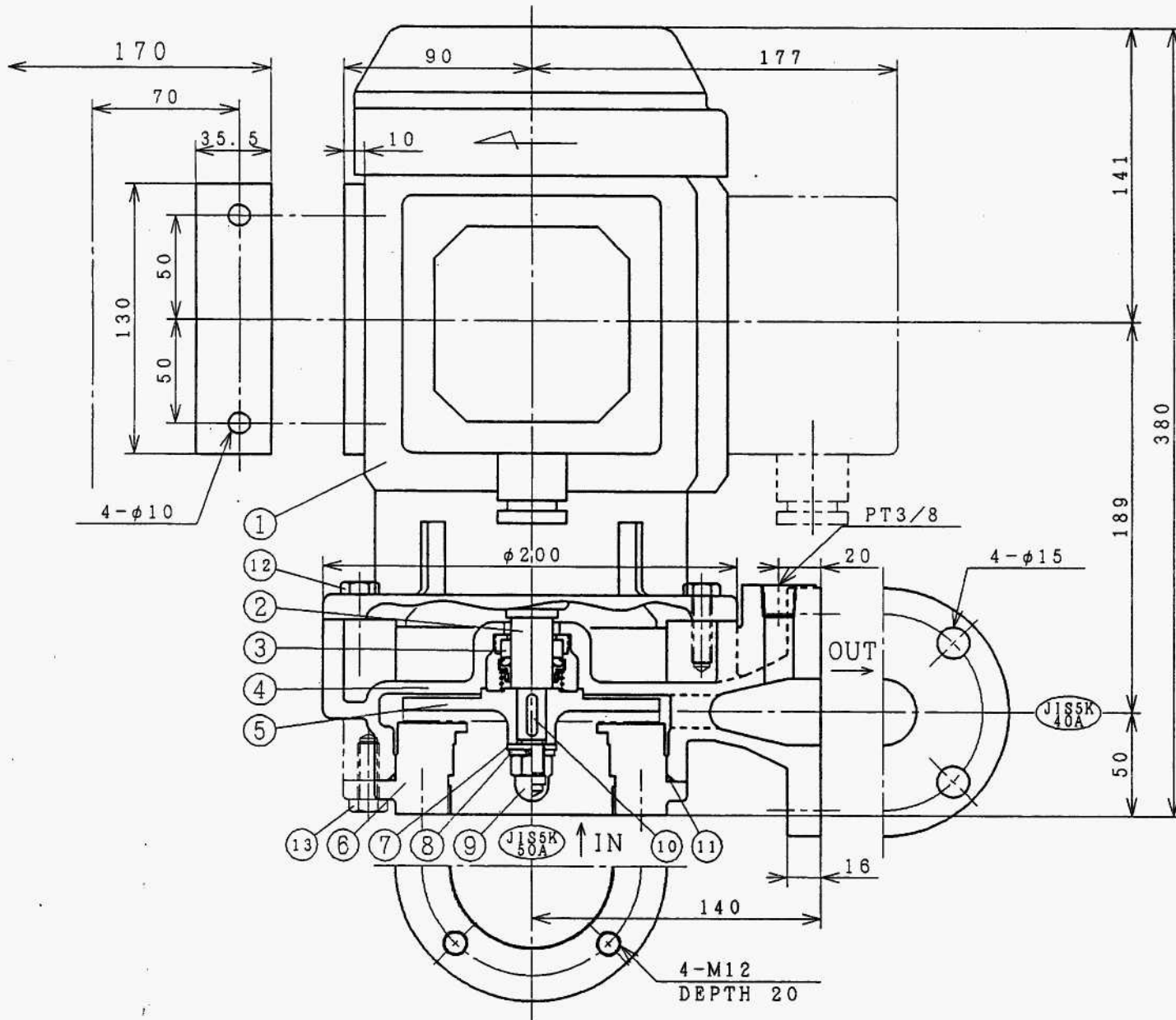
※Please make back pressure to be below 50mm(water head) for the air vent pipe.

17	NAME PLATE	STAINLESS STEEL	
16	PRESSURE GAUGE	BRASS	0.1 MPa
15	PRESSURE GAUGE	BRASS	0.4 MPa
14	EARTH ROD	STAINLESS STEEL	
13	EMERGENCY OVERFLOW CONN.	MILD STEEL	
12	CLEANING WATER INLET CONN.	MILD STEEL	
11	DISCHARGE CONN.	MILD STEEL	
10	LADDER	MILD STEEL	
9	CONTROL PANEL	MILD STEEL	
8	DISCHARGE PUMP	CAST IRON	CR-50S
7	BLOWER	CAST IRON	TSS-32
6	STERILIZER	VINYL CHLORIDE	
5	LEVEL PROBE	AL ALLOY CASTING	CT-2
4	COVER	MILD STEEL	
3	AIR OUTLET CONN.	MILD STEEL	
2	SEWAGE INLET CONN.(2)	MILD STEEL	
1	SEWAGE INLET CONN.(1)	MILD STEEL	

No.	名称 NAME	材質 MATERIALS	記事 REMARKS
水圧試験 W.T.P.	0.025 MPa	台数 REQ.No.	1
形式 TYPE	SBT-25	承認 APPROVED BY	Y. YAMADA
名称 NAME		検図 CHECKED BY	T. MIURA
		設計 DESIGNED BY	
		製図 DRAWN BY	K. TAKEUCHI
尺度 SCALE	1:22	大見工番 TAIKO KIKAI W.No.	
日付 DATE	2001.12.6.	図番 DRAWING No.	SBT-25101

TAIKO KIKAI INDUSTRIES CO., LTD.

Drawing No. SBT-25201 and SBT-25213 are included in this drawing.



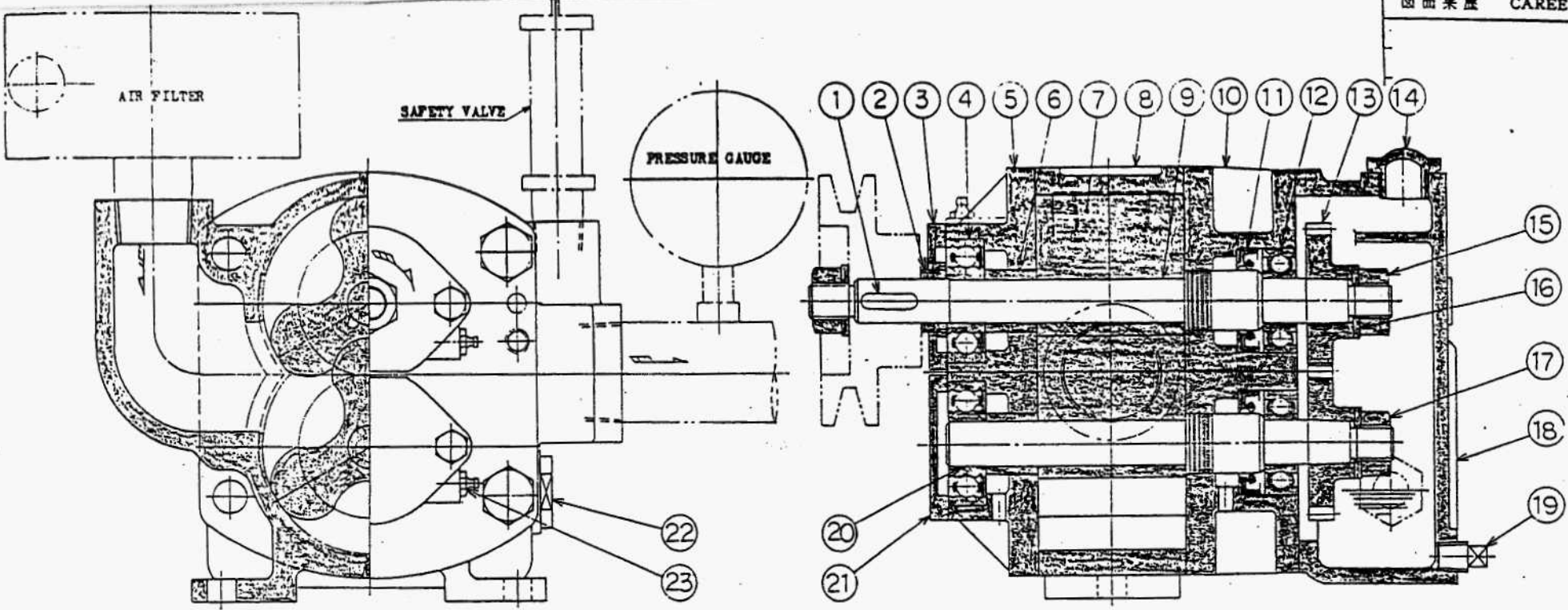
I T E M S		
DISCHARGE HEAD	m	20
SUCTION HEAD	m	0
TOTAL HEAD	m	20
CAPACITY	m ³ /h	4
REVOLUTION	min ⁻¹	3600
MOTOR OUT PUT	kW	1.5

BALL BEARING	
C. SIDE	O. C. SIDE
6205 ZZ	6205 ZZ

13	BOLT	MILD STEEL	4	M10
12	BOLT	MILD STEEL	4	M10
11	*O-RING	RUBBER	1	G-130
10	KEY	STAINLESS STEEL	1	
9	IMPELLER NUT	STAINLESS STEEL	1	M12
8	SPRING WASHER	STAINLESS STEEL	1	M12
7	IMPELLER WASHER	STAINLESS STEEL	1	M12
6	HOLDER	CAST IRON	1	
5	IMPELLER	CAST IRON	1	
4	CASING	CAST IRON	1	
3	MECHANICAL SEAL	STAINLESS STEEL	1	
2	MOTOR SHAFT	STAINLESS STEEL	1	
1	MOTOR		1	

No.	NAME	MATERIALS	Qu.	REMARKS
耐圧試験 T.P.	0.49MPa	台数 REQ. NO.	1 Set	重量 WEIGHT
型式 TYPE	CR-50S	承認 APPROVED BY		39 kg.
名称 NAME	DISCHARGE PUMP	検閲 CHECKED BY		Y. Yamada
		設計 DESIGNED BY		T. Miura
		製図 DRAWN BY		K. Miyazawa
		大晃工業 TAIKO KIKAI W. NO.		N. Nakashima
尺度 SCALE	1:3	図章 DRAWING NO.		
日付 DATE	'95. 6. 27			S07027900

TAIKO KIKAI INDUSTRIES CO., LTD.



ITEMS		
BORE	m/m	32
DISCHARGE PRESS.	MPa	0.02
SAFETY VALVE P.	MPa	0.025
CAPACITY	l/min	370
REVOLUTION	min ⁻¹	1750
MOTOR OUT PUT	KW	0.4
MOTOR REVOLUTION	min ⁻¹	1800

LUB. OIL & GREASE	
LUB. OIL	TURBINE OIL VG68
CAPACITY	0.13L
GREASE No.	No.2

FITTING (1 BLOWER)	
NAME OF PART	REQ. NO.
V PULLEY (B) A-1 φ 75	1
V PULLEY (M) A-1 φ 80	1
V BELT A-24	1
AIR FILTER	1
SAFETY VALVE	1
PRESSURE GAUGE	1
BASE	1
SAFETY COVER	1

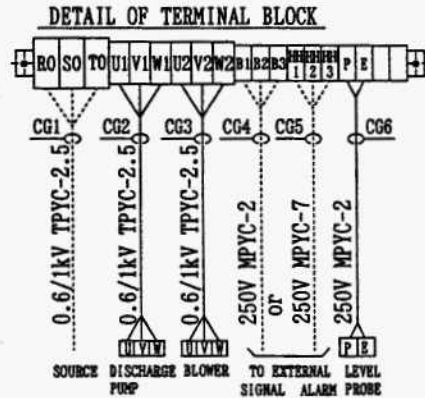
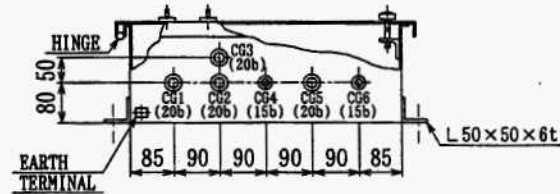
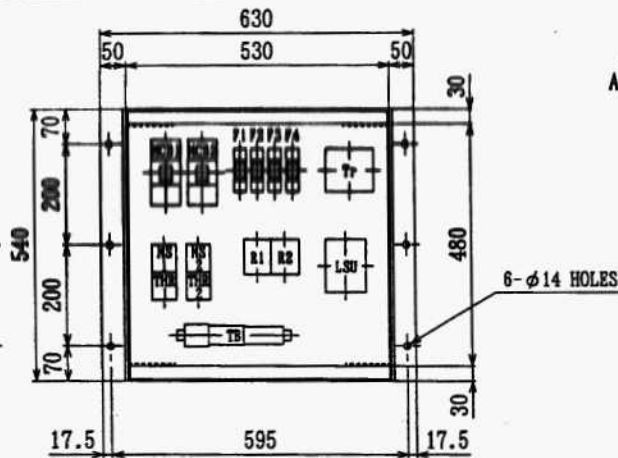
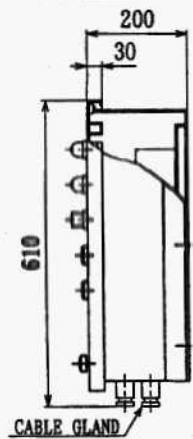
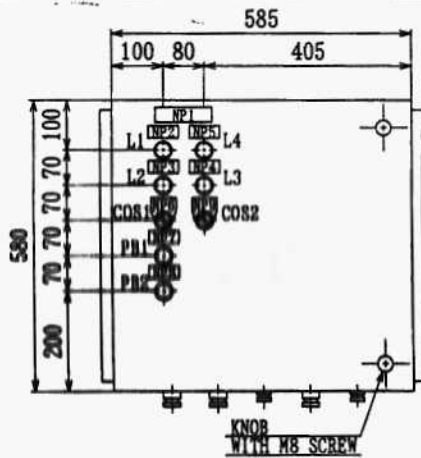
23 GREASE NIPPLE	BRASS	2	A-M75x1	
22 OIL LEVEL GAUGE	PLASTIC	1		
21 BEARING COVER	CAST IRON	1		
20 DRIVEN SHAFT	CARBON STEEL	1		
19 DRAIN PLUG	CAST IRON	1		
18 GEAR CASE	CAST IRON	1		
17 NUT	MILD STEEL	1		
16 WASHER	MILD STEEL	3		
15 NUT	MILD STEEL	2		
14 AIR BREATHER	PLASTIC	1		
13 GEAR	Cr-Mn STEEL	2		
12 BALL BEARING	BEARING STEEL	2	6202CM	
11 OIL SEAL	RUBBER	2	4020777	
10 SIDE COVER	CAST IRON	1		
9 DRIVE SHAFT	CARBON STEEL	1		
8 CASING	CAST IRON	1		
7 IMPELLER	CAST IRON	2		
6 BEARING SLEEVE	CARBON STEEL	2		
No.	NAME	MATERIALS	QU.	REMARKS

5 SIDE COVER	CAST IRON	1		
4 BALL BEARING	BEARING STEEL	2	6302VM	
3 BEARING COVER	CAST IRON	1		
2 COLLAR	CARBON STEEL	1		
1 KEY	CARBON STEEL	1		
No.	NAME	MATERIALS	QU.	REMARKS

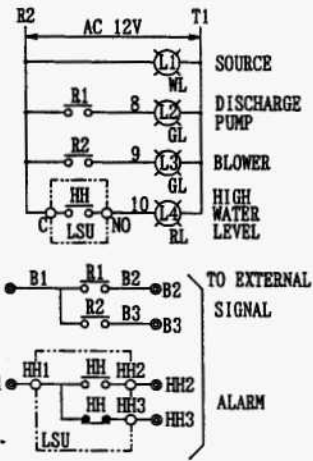
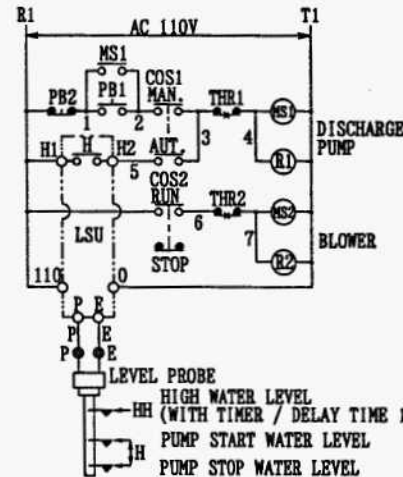
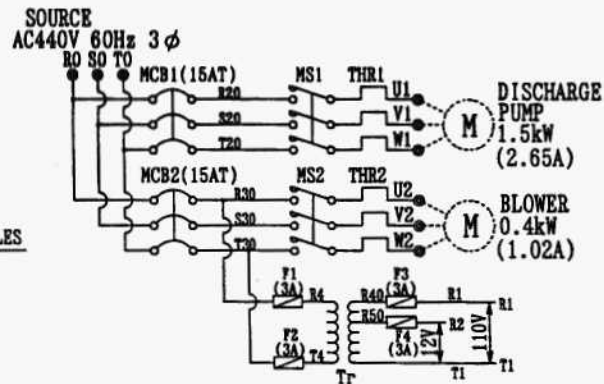
水压試験	—	製造台数	1台	重量	INCLUDE MOTOR&BASE
HYD. TEST PRESS.		REQUIRED	SET	WEIGHT	29 kg

型式	TSS-32	部長	
TYPE		MANAGER	
名称	AERATION BLOWER	課長	
NAME		CHIEF SECTION	
		係長	
		CHIEF SUB. SEC.	
		検査	
		CHECKER	
		製図	
		DRAWER	

尺度	第3角法	大晃機械工業
SCALE	3rd. ANGLE PROJECT	TAIKO KIKAI W.NO.
日附	図番	
DATE	DRAWING NO.	
Mar. 3, 1979	S 08022520	



— WIRING BY MAKER
 - - - - - WIRING BY YARD



NP-No.	PART-No.	PART NAME	MODEL No.	MP'R	LETTERS ON NAME PLATE	REMARKS
NP1					SEWAGE TREATMENT UNIT CONTROL PANEL	
NP2	L1	SIGNAL LAMP	AH30-ZMRC	FUJI	SOURCE	WL
NP3	L2	SIGNAL LAMP	AH30-ZMRC	FUJI	DISCHARGE PUMP	GL
NP4	L3	SIGNAL LAMP	AH30-ZMRC	FUJI	BLOWER	GL
NP5	L4	SIGNAL LAMP	AH30-ZMRC	FUJI	HIGH WATER LEVEL	RL
NP6	COS1	CHANGE OVER SWITCH	KH-3011	KUN-HUNG	MANU. AUTO.	
NP7	PB1	PUSH BUTTON SWITCH	KH-308	KUN-HUNG	START	
NP8	PB2	PUSH BUTTON SWITCH	KH-308	KUN-HUNG	STOP	
NP9	COS2	CHANGE OVER SWITCH	KH-311	KUN-HUNG	STOP RUN	
	MCB1, 2	CIRCUIT BREAKER	DB33S 15AT	DONG-A		
	MS1, 2	MAGNETIC SWITCH	MUE 10-4HB	DONG-A		
	THR1	THERMAL RELAY	THD 010D (2.2-3.4A)	DONG-A		
	THR2	THERMAL RELAY	THD 010D (0.8-1.2A)	DONG-A		
	F1-4	FUSE	NC-1 + FHSC1F	UTSUNOMIYA		
	Tr	TRANSFORMER	AC440V/AC110V.12V	HAN KUK T/R		150VA
	LSU	LEVEL SWITCH UNIT	S-02020010 (CT-2-3)	FELLOW		
	R1, 2	POWER RELAY	MY2	OMRON		
	TB	TERMINAL BLOCK	SH-35A(3P), 25A(6P), 15A(10P)	SUNG-HO		

PAINTING COLOR : MUNSELL No. 7.5BG7/2
 (MANUFACTURE STANDARD)

水圧試験 W.T.P.	—	台数 REQ.No.	1	重量 WEIGHT	36 kg
型式 TYPE	SBT-25		承認 APPROVED BY	Y. YAMADA	
名称 NAME	SEWAGE TREATMENT UNIT CONTROL PANEL		検図 CHECKED BY	T. MIURA	
	LA2686099		設計 DESIGNED BY	K. TAKEUCHI	
尺度 SCALE	1:15	大塊工番 TAIKO KIKAI W.No.	DRAWN BY		
日付 DATE	2002.2.5.	図番 DRAWING No.	SBT-25217		
TAIKO KIKAI INDUSTRIES CO., LTD.					