DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

GHQ/SCAP Records (RG 331, National Archives and Records Service)

Description of contents

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(2) Folder title/number: (6)
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(3) Date: Sept. 1946 - Aug. 1949

(4) Subject:

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(5) Item description and comment:
Takaoka, Toyama-ken

(6) Reproduction: (Yes) No

(7) Film no. Sheet no.

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DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

GENERAL HEADQUARTERS
SUPREME COMMANDER FOR THE ALLIED POWERS
Economic and Scientific Section

12 August 1949
Date

TO: Toyama
~~[illegible]~~
Civil Affairs Team

SUBJECT: Reconversion Permit for Reparations Plant

1. Inclosed is an Operating Permit for Nippon Soda Co., Ltd.
Name of Company

Takaoka — #420 Mukaino-machi, Takaoka-shi, Toyama Pref.
Plant Name — Address

2. This permit will be granted the company unless the company is not fully complying with current directives effecting operation of the Reparations Plants.

3. If the permit is not given the Supreme Commander will be notified immediately of the reasons for the withholding of the permit and recommendations as to continued operation of the plant. An information copy will be sent direct to the Supreme Commander (Attn: ESS/IN) and action copies forwarded through command channels.

FOR THE CHIEF, ECONOMIC AND SCIENTIFIC SECTION:

W. S. Vaughan

W. S. VAUGHAN
Chief, Industry Division

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

GENERAL HEADQUARTERS
SUPREME COMMANDER FOR THE ALLIED POWERS
Economic and Scientific Section

12 August 1949
Date

SUBJECT: Reconversion Permit for Reparations Plant

TO: Nippon Soda Co., Ltd., Takaoka Plant
#420 Mukai no-machi, Takaoka-shi, Toyama Pref.

1. In accordance with Memorandum from the Supreme Commander for the Allied Powers to the Japanese Government, dated 22 November 1946 (SCAPIN-1355), the Nippon Soda Co., Ltd. is permitted to produce at their Takaoka Factory located at Mukaino, Takaoka the following additional items:

Item	Maximum Quantity
Sulphuric Acid	300 mt per month
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX

2. The temporary use of the following additional reparations machinery is authorized:

Not Applicable	

3. A program will be immediately initiated to substitute non-reparations machinery for reparations machinery in temporary use.

4. The acquisition of material, parts and sub-assemblies as well as the disposition of finished products and the establishment of sales prices will be in accordance with the regulations of the Japanese Government.

5. This permit is issued subject to any and all directives affecting reparations plants which have been issued or may hereafter be issued by the Supreme Commander for the Allied Powers. Reports will be rendered as required by current directives and instructions.

FOR THE CHIEF, ECONOMIC AND SCIENTIFIC SECTION:

W. S. Vaughan

W. S. VAUGHAN
Chief, Industry Division

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

OUTLINE OF PLANT

February 8, 1949

Takaoka Plant, Nippon Soda Co., Ltd.

No. 420, Mukaino-machi, Takaoka City

Toyama Prefecture

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

(1) History of Our Plant

Our plant was founded in Octoberb1934 with the object of manufacturing industrial chemicals, dyestuffs and medicines. At first we began the manufacture of caustic soda, hydrochloric acid and bleaching powder by electrolysis of salt by the mercury process.

In December of the next year, 1935, the sulfuric acid plant began to be operated. Thereafter, chlorosulfuric acid , H-acid, sulfamine, liquid chlorine, hexachlorethane and aluminum chlorides were manufactured respectively. On the other hand, we began the manufacture of aluminum in May 1937.

After surrender, we resumed production of caustic soda, liquid chlorine, hydrochloric acid and bleaching powder with the object of obtaining liquid chlorine to meet the requirement of the Occupation Forces. We were the first to semi this product, thus contributing to the chlorination of drinking water. Thereafter, we resumed the manufacture of sulfuric acidto contribute to the production of fertilizer as well as to manufacture chlorosulfonic acid. Soon afterwards Chlorosulfonic acid, saccharine, sulfamine and sulfaguanidine etc. were manufacture and supplied to market for contributing to the welfare of the people and maintenance of public health. Furthermore, in the recent time, we have began the manufacture of such principle medicines as sulfathiazole and sulfamerazine and B-naphthole.

At present, we are planning and reparing for the manufacture of some kinds of industrial chemicals, medicines, and dyestuffs.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

(2) Present condition

(a) Employees (as of January 31)

Men	1,302
Women	144
Total	1,446

(b) Outline of equipments

Name of product	Designed capacity	Workable capacity
Caustic soda	540,000 Kg	460,000 Kg
Hydrochloric acid	600,000 "	440,000 "
Bleaching powder	180,000 "	120,000 "
Liquid chlorine	240,000 "	240,000 "
Sulfuric acid	300,000 "	300,000 "
Calcium chloride	100,000 "	100,000 "
Chlorosulfonic acid	120,000 "	100,000 "
Sulfamine	4,000 "	3,000 "
Sulfaguanidine	2,000 "	2,000 "
Sulfathiazole	2,500 "	2,000 "
Sulfamerazine	250 "	250 "
B-Naphthole	10,000 "	8,000 "
J- acid	3,000 "	3,000 "
K- acid	5,000 "	5,000 "

(c) Production (in January,1949)

Name of product	Quantity
Liquid caustic soda	132,778 Kg
Solid caustic soda	100,340 "
Hydrochloric acid	118,380 "
Liquid chlorine	44,380 "
Bleaching powder	77,000 "

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

Sulfuric acid	83,550	Kg
Fuming sulfuric acid	165,710	"
Chlorosulfonic acid	33,600	"
Sulfathiazole	1,017.100	"
Sulfamine	1,085.000	"
Sulfamerazine	216.436	"
B-Naphthole	6,635	"
acid	60.5	"

(3) The problem of reparation

Since the time when our caustic soda plant and sulfuric acid plant were included in the interim reparation program on 24th August 1946, we have executed faithfully the duties and responsibilities for guarding and preserving the designated equipments. And we were given recognition for our efforts by the chief of the Reparation Bureau of Ministery of Commerce and Industry on May 13, 1948.

On the other hand, as to the designated plants, we presented an application for exemption of these equipments from the reparation program to G. H. Q. through Toyama Pref . on 16th September 1946 and to G. H. Q. through Nagoya Commerce and Industry Bureau on 30th May 1947.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

REPARATION INSPECTION CHECK SHEET

Toyama Prefecture

1. Plant Code No. 42 - 10
- 14

2. Name of Plant. Takaoka Plant, Nippon Soda Co., Ltd.

Location. No. 420, Mukaino-machi, Takaoka city, Toyama Pref.

3. Category of Plant. Caustic soda Established Oct. 1934
Sulfuric acid

4. Made : Pre-war Industrial Chemicals Alumina
Aluminum Dyestuffs Medicines

During war Industrial Chemicals Alumina
Aluminum Medicines

Now Industrial Chemicals Medicines
Dyestuffs

5. Employed : Pre-war 2241 (as of 1940)

During war 4900 (as of 1943)

Now 1446

6. Equipment (Machine tool) classification.

Total 963(caustic soda)
106(Sulfuric acid)

No.1 235(213) (caustic soda)
53(11) (sulfuric acid)

Note : ( ) shows number of machineries which are included in the inventried machineries.

No.2

No.3

Avg. Age 8 years

Foreign made None

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

7. Equipment now in operation :

Total 438 (Caustic Soda)
79 (Sulfuric Acid)

Its maintenance _____

Equipment now in " Authorized Use "

Total _____ in operation _____

Equipment reported in " Authorized Use ", now not in " Authorized Use ".

Total _____ (List inventory number on back)

8. Classification deemed satisfactory/unsatisfactory ? _____

9. Reclassification deemed essential/not essential ? _____

10. Inventory completed ? Yes

Item not inventoried See attached sheet

11. Overall maintenance :

Excellent/Good/Fair/Poor _____

12. Reconditioning in progress ? _____

To be completed by _____ 1949 _____ employees,

_____ of them skilled machines, engaged in maintenance and reconditioning of equipment.

13. General appearance of Plant/Storage and equipment : _____

14. General impression of management/custodian : _____

15. Estimated removability of equipment (by value) _____ %

of buildings _____ %

16. Engineers avilable who installed equipment originally :

15 (Caustic Soda)
5 (Sulfuric Acid)

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

17. Plant's experience in dismantling ? No

In preparation (packing) for shipment ? No

In re-assembly at destination No

18. Time required for dismantling & packing 6 months

For re-assembling 6 months

19. Recommended port for shipment Fushiki Port

Mode of transp. to port _____ on Ry. spur _____

Ry to port pier _____

20. Is plant well guarded ? _____

Has plant been evaluated by JG ? Yes

21. Petition on file for removed from reparation liars. Yes

22. Is plant typical ? _____

Remarks : _____

23. Estimated weight and dimentions of largest package after dismantling and crating.

15 tons 25 x 25 x 35 m

24. How many buildings comprise this plant ? 185

How many include reparation equipment ? 18

How many reparation equipments are used immediately ?

18

25. What functional subdivision are include in the plant and in which building are they located ? _____

26. Is a clear plant layout with adequate identification and description of all functional subdivision available in Reparation (if more than one functional subdivision) ?

_____ (if not, obtain one)

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

If a plant evaluation report is available in Reparations, does its buildings identifications agree with plant layout ?

_____

27. Is plant large, medium, or small in comparison to other plants of similar type ? _____

If large or medium, what possible break down or grouping of subordinate units into 2 or 3 allocation units appears most logical ? _____

28. If major portion of the plant are less useful or less desirable than other portions, specify the poorer sections (and building location) _____

29. If this plant is a dispersal area or is very small, could it be allocated with another nearly plant or dispersal area ?

_____

30. Does the equipment in authorized use destory the balance or impair the usefullness of available equipment ? _____

If so, how ?_____

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

Sheet of Reparation Machineries

Prefecture Toyama

Location : No. 420, Mukaino-machi, Takaoka City, Toyama Pref.

Code No. : 42 - 10
42 - 14

Industrial category : Caustic soda
Sulfuric acid

Name of Plant : Takaoka Plant, Nippon Soda Co., Ltd.

I) Present condition of inventoried machineries

A) Code No. and date of C.D.

Caustic soda	SCAPIN	1129	Aug. 13, 1946
Sulfuric acid	"	1132	"

Number of inventoried machineries

Caustic soda	235(213)
Sulfuric acid	53(11)

Note : ( ) shows number of machineries which are included in the inventoried machineries.

B) Classification of the time when the machineries and equipment were inventoried

(1) Ex None
(2) S.P. None
(3) C.P.C. None

C) Ex machineries to be transmitted in reparation plant or made by the permission of Military Government Team

Caustic soda	3	
Sulfuric acid	11	(See attached List No.1)

D) The reparation machineries which were transmitted by the permission of Military Government Team after inventoried and included in above A.

None

E) Treatment of S.P.

(1) Number of machineries which were destroyed and classification as the machineries for general use as the old No.

None

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

(2) Number of machineries which were not destroyed by the order of Military Government Team and become the machinery for general use.

None

(3) Number of machineries which were taken away from machineries to be destroyed as S.P. and inventoried additionally.

None

(4) Number of machineries which were destroyed perfectly and taken away from inventory.

None

F) Total ($A^1C^1D^1E_3-E_4$)

Caustic soda : 238 (213)

Sulfuric acid : 64 (11)

G) Code No. of machineries

(1) The lowest Code No. of machineries

(2) The highest Code No. of machineries

(See attached list No. 2)

The reason why total F is not as same as total G.

Because Ex machineries, which were stated in (C), were not inventoried.

2) Present condition of reparation machineries.

A) Number of machineries which stop

Caustic soda : 525 (See attached list No. 3)

Sulfuric acid : 27 (")

B) Number of machineries which operate (Out of Ex and CPU)

1) Number of machineries which are "Authorized Use" for the use in the hand of Japan

None

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

(2) Number of machineries which are used in the hand of Japan by the permission of Military Government Team (Out of U mark)

Caustic soda : 438 (See attached list No. 3)

Sulfuric acid : 79 (")

(3) Number of machineries which are " Authorized Use " For the use in the hand of the army of occupation.

None

(C) Ex machineries

(1) Number of machineries which are left in the plant

Caustic soda : 3

Sulfuric acid : 11

(2) Number of machineries which were taken out of the plant by the permission of Military Government Team

None

(D) Number of machineries which were eliminated by Military Government Team

(1) Number of machineries which were inventoried false (Recognized as scrap)

None

(2) Number of machineries which were corrected the doubled inventory

None

(3) Number of machineries which were destroyed by fire, flood etc.

None

(E) CPC machineries

None

(F) Number of machineries which were taken away from the plant by P.D.

None

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

(G) Number of machineries which were taken away from the plant by the permission of Military Government Team for the use of Japanese out of Ex.

None

(H) Number of inventoried machineries which are broken up in the Plant tobe exempted from reparation purpose

None

(I) Number of machineries which are taken away from the plant by the hand of Technical Information Force of G. H. Q.

None

(J) Number of machineries which were not included above mentioned A ---- I

None

(K) Total(A----J)

Caustic soda : 965

Sulfuric acid : 117

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

No. 1

LIST OF MACHINERIES WHICH REMOVED TO REPARATION
PLANT AFTER DESIGNATION FOR REPARATION

Takaoka Plant, Nippon Soda Co., Ltd.

Name of Machinery	Number	Removed to
Transformer	1	Sulfuric acid plant
Acid cooler	1	"
Roll Crusher	1	"
Electric preheater	1	"
Measuring tank	1	"
Gas drying tower	1	"
Acid circulating tank	1	"
Acid cooling tank	1	"
Turbin pump	1	"
Motor	1	"
Electric heater	1	Salt solution plant
Centrifugal tank	1	Evaporating plant
Nash pump	2	Liquid chlorine plant

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

INVENTORY FORM

Takaoka Plant, Nippon Soda Co., Ltd.

No. 420, Mukaino-machi, Takaoka City,
Toyama Prefecture

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

INVENTORY FORM FOR CAUSTIC SODA PLANTS

Date 18 April, 1947

Name of Company Nippon Soda Co.,Ltd. Related SCAPIN No. 1129

Name of Plant Takaoka Plant Code No. 42 - 10

Adress of Plant No. 420, Mukaino-machi, Takaoka City,
Toyama Prefecture.

	Number Marked	
I. Chemical Manufacturing		140
A. Equipment		140
1. Electrolysis cells	97	
2. Evaporators for caustic	2	
3. All other equipment used for manufacturing caustic soda (except that listed below)	41	
II. Electrical Machinery and Apparatus		42
A. Electrical Rotating Equipment		24
1. Generators	0	
2. Motors	21	
3. Motor generators	0	
4. Frequency changers	0	
5. Converters and inverters	3	
6. Generator sets (direct coupled to rime mover)	0	
B. Primary electric Power Transmission and Distribution		18
1. Transformer	6	
2. Switches	12	

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

INVENTORY FORM FOR CAUSTIC SODA PLANT S

Date 18 April, 1947

Name of Company Nippon Soda Co.,Ltd. Related SCAPIN No. 1129

Name of Plant Takaoka Plant Code No. 42 - 10

Adress of Plant No. 420, Mukaino-machi, Takaoka City,
Toyama Prefecture

	Number Marked
III. General Purpose Industrial Machinery and Equipment.	53
A. Engines, Turbines and Boilers	0
1. Steam engines	0
2. Steam turbines	0
3. Boilers, power	0
4 Insternal combustion engines	0
B. Compressors and Pumps	53
1. Compressors and dry vacuum	10
2. Pumps	43

DETAILS OF THE MACHINERIES OF CAUSTIC SODA PLANTS

FOR INVENTORY

Takaoka Plant, Nippon Soda Co., Ltd.
No. 420, Mukaino-machi, Takaoka City,
Toyama Prefecture.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 773 013

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 713013

DETAILS OF THE NUMBER OF THE MACHINERYES FOR INVENTORY

Item	Number Inventoried	Number Not inventoried	Total
I. Chemical Manufacturing			
A. Equipment			
1. Electrolysis cell	97 (194)	49 (99)	146 (293)
2. Evaporators for caustic soda	2 (1)	0	2 (1)
3. All other equipment used for manufacturing caustic soda	41 (4)	25 (0)	66 (4)
II. Electrical Machinery and Apparatus			
A. Electrical roating equipment			
2. Motors	21 (0)	0	21 (0)
5. Converters and inverters	3 (1)	0	3 (1)
B. Primary Electric Power transmission			
1. Transformer	6 (0)	0	6 (0)
2. Switches	12 (0)	0	12 (0)

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

III. General Purpose Industrial Machineries and equipment

B. Compressors and Pumps

1. Compressors and dry vacuum	10 (1)	0	10 (1)
2. Pumps	43 (213)	76 (99)	343 (312)
Total	235 (213)	76 (99)	311 (312)
Number of machineries, not necessary to be inventoried except above			18
Grand Total			641

Note : ( ) is the number of the machineries stated in the remarks of " List of the Machineries " .

Note : The number of the machineries of caustic soda plant, the list of which was submitted formerly. 611

The number of the machineries of the chlorine recovery equipment state in the " List of the Machineries ". 30

Total 641

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

List of the inventoried machineries

(A : In good condition
(B : This can be repaired econimically

Code No.	Item	Number A	B	Total	Remarks
IA1-1-56	Electrolysis cell	56			Including, decomposition vessel and mercury pump
IA1-57-97	"	41			" "
	Total	97		97	
IA2- 1 -2	Evaporator	2		2	With one common condencer
	Total	2		2	
IA3- 1- 6	Settling tank	6			
IA3- 7-10	Filter press	4			
IA3-11	Bucket elevator	1			
IA3-12	Colling tank	1			
IA3-13	Circulating tank	1			
IA3-14	Centrifugal s3parator		1		With 5 HP motor
IA3-15	Ammonia condenser	1			
IA3-16	Ammonia receiver	1			
IA3-17	Brine cooler		1		With accumlator
IA3-18	Brine serge tank		1		
IA3-19-20	Soda ash dessolving tank	2			
IA3-21	Absorption tower	1			

Code No.	Item	Number A	Number B	Total	Remarks
IA3-22	Blower		1		
IA3-23-24	Poscelain tank	2			
IA3-25-29	Caustic soda solution tank		5		
IA3-30	Storage tank for salt solution		1		
IA3-31	Head tank for salt solution		1		
IA3-32	Turbo blower	1			
IA3-33-34	"	2			
IA3-35	Trommel		1		
IA3-36	Stirring washer		1		
IA3-37-38	Blower		2		
IA3-39	Storage tank for 50°Be		1		
IA3-40-41	Concentrating pan	2			
	Total	12	29	41	
IIA2-1-5	5 HP motor	5			For manufacturing bleaching powder
IIA2-6-10	7.5 HP motor	5			"
IIA2-11	5 HP moter	1			
IIA2-12-15	"	2			

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 743013

Code No.	Item	Number A	B	Total	Remarks
IIA2-14	5 HP motor	1			For manufacturing liquid chlorine
IIA2-15-17	"	3			" coupled with machine
IIA2-18	30 HP motor	1			" " " "
IIA2-19	40 HP motor	1			" " " "
IIA2-20-21	15 HP motor	2			Coupled with the machine not inventoried
	Total	21	0	21	
IIA3-1-2	Converter	2			With one induction voltage regulator
IIA3-3	"		1		
	Total	2	1	3	
IIB1-1	Transformer for converter		1		
IIB1-2-3	"	2			
IIB1-4-6	Transformer	3			Used for another plant also
	Total	5	1	6	
IIB2-1-3	Switch	3			For transformer (IIB1-1- IIB1-3)
IIB2-4-9	"	6			For converter (IIA3-1 - IIA3-3)
IIB2-10-11	"	2			
IIB2-12	"	1			For transformer (IIB1-4 - IIB1-6)
	Total	12	0	12	

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

Code No.	Item	Number A	Number B	Total	Remarks
IIIB1- 1	Ammonia compressor		1		With 75 HP motor
IIIB1- 2	Air compressor		1		For manufacturing hydrochloric acid
IIIB1- 3- 5	Ammonia compressor	3			For manufacturing liquid chlorine, with motor
IIIB1- 6	Booster		1		" " " "
IIIB1- 7- 8	"	2			" " " "
IIIB1- 9	Air compressor	1			" " " "
IIIB1-10	Vacuum pump		1		
	Total	6	4	10	
IIIB2- 1- 3	Pump		3		With 5 HP motor
IIIB2- 4	"		1		
IIIB2- 5- 6	"		2		With 20 HP motor
IIIB2- 7	"		1		
IIIB2- 8	"		1		With 20 HP motor
IIIB2- 9-12	"		4		
IIIB2-13-16	"		4		
IIIB2-17-20	"		4		
IIIB2-21-22	"		2		With 7.5 HP motor
IIIB2-23-24	"		2		

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 773 013

Code No.	Item	Number A	Number B	Number Total	Remarks
IIIB2-25-26	Pump		2		With 15 HP motor
IIIB2-27	"		1		
IIIB2-28-29	"		2		With 20 HP motor
IIIB2-30	"		1		
IIIB2-31	"		1		For manufacturing hydrochloric acid
IIIB2-32	"		1		For manufacturing bleaching powder, with 10 HP motor
IIIB2-33	"		1		" , with 20 HP motor
IIIB2-34-37	"		4		For manufacturing liquid chlorine,
IIIB2-38-39	"		2		" , with 5, 7.5 HP motors
IIIB2-40	"		1		" ,
IIIB2-41-43	"		3		" , with 5 HP motor
	Total	43	43		
	Grand Total			235	

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 773 013

List of the machineries not inventoried

(The machinery listed hereon cannot)
(be repaired economically, or damaged)
(dismantling and moving.)

	Number No.	Total	Reason
10) Heating furnace for concentrating pan	2		Made of brick
11) Chimney	1		Corroded and not used now
1. Chemical Manufacturing A. Equipment			
1. Electrolysis cell	49	49	Damaged, including decomposition vessel, mercury pump and conductor.
3. All other equipment used for manufacturing caustic soda		25	
1) Settling tank	9		Corroded
2) Filter press	2		Without handle, flame and plate
3) Dissolving tank	2		Corroded
4) Cooling tank	2		Circulating pipe damaged
5) Blower	1		Inside broken
6) Head tank for water	1		Worn out
7) Heating tank for water	2		Corroded and not used now
8) Stirring washer	1		Worn out, gear damaged
9) Distillatary pot for mercury	1		Damaged
10) Heating furnace for concentrating pan	2		Made of brick
11) Chimney	1		Corroded and not used now

Item	Number No.	Total	Reason
12) Blower	1		Corroded
III. Genstral purpose Industrial Machinery and Equipment			
B. Compressor and pumps			
2. Pump		2	
1) Pump	1		Inside broken
2) "	1		Worn out
Grand Total		76	

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 773 013

INVENTORY FORM FOR SULPHURIC ACID PLANT

Date 18 April, 1947

Name of Company: Nippon Soda Co., Ltd. Related SCAPIN No. 1132

Name of Plant : Takaoka Plant Code No. 42-14

Address of Plant: No. 420, Mukaino-machi, Takaoka City, Toyama Prefecture.

	Number Marked
I. Chemical Manufacturing	53
A. Equipment	53
1. Roster	1
2. Gas clearing equipment	5
3. Contact equipment	0
4. Blower	3
5. All other chemical manufacturing equipment	44
II. All Other Equipment	0
A. Equipment	0
1. Items	0

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 773 013

DETAILS OF THE MACHINERIES OF SULFURIC ACID PLANT
FOR INVENTORY

Takaoka Plant, Nippon Soda Co., Ltd.

No. 420, Mukaino-machi, Takaoka City,
Toyama Prefecture

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 773013

Detail of the number of the machineries for inventory

Item	Number: Inventoried	Not inventoried	Total
1 Chemical Manufacturing			
A. Equipment			
1. Roaster	1 (1)	0	1 (1)
2. Gas clearing equipment	5 (0)	4 (0)	9 (0)
3. Contact equipment	0	1 (0)	1 (0)
4 Blower	3 (3)	0	3 (3)
5. All other chemical manufacturing equipment	44 (7)	11 (0)	55 (7)
Total	53 (11)	16 (0)	69 (11)
Number of machineries not necessary to be inventoried except above			26
Grand total			106

Note : ( ) is the number of the machineries started in the remarks of " List of the machineries".

List of the inventoried machineries

(A: In good condition)
(B: This can be repaired economically)

Code No.	Item	A	B	Number Total	Remarks
1 - 1	Roaster		1		With 15 H P fan: Brick lining
	Total		1	1	
1A2 - 1 - 3	Cottrell dust catcher		3		
1A2 - 4	Gas drying tower		1		Brick lining
1A2 - 5	Gas filter		1		The pocelain filter tube destroved at dismantling
	Total		5	5	
1A4 -1 - 2	Blower		2		with 15 HP motor
1A4 6 3	"		1		
	Total		3	3	
1A[illegible] 1	Crusher	1			with 7,5 HP motor
1A5-2-4	Electric rectifier		3		with switch and switch board
1 A5-6-8	Acid cooling tank		4		
1A5-9-11	Acid circulating tank		3		
1A5-12	Acid circulating tank		1		
1A5-13	Acid cooler		1		
1A5-14	Air cooler				

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 743 013

Code No.	Item	Number A	B	Total	Remarks
1A5-15-17	Absorption tank		3		Brick lining
1A5-18	Preheater	1			
1A5-19	Exhaust fan	1			
1A5-20-22	Acid circulating tank		3		
1A5-23-27	Acid cooler		5		
1A5-28	Dilution tank		1		Enamal lining
1A5-29-30	Receiver	2			
1A5-31	"		1		
1A5-32-33	"	2			
1A5-34	Pump		1		With 5 HP motor
1A5-35	"		1		
1A5-36-37	"		2		With 6 HP motor
1A5-38-44	"		7		
	Total	8	34	44	
	Grand total			53	

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 773 013

(The machineries listed hereon cannot)
(be repaired economically, or damaged)
(dismantling and moving)

Item	Number No	Total	Reason
Chemical Manufacturing			
4. Equipment			
2. Gas clearing equipment		4	
1) Cottrell dust catcher	1		Made of brick
2) Washing tower	3		Corroded will be collapsed at dismantling brick lining
3. Contact equipment		1	
1) Converter	1		Corroded will be collapsed at dismantling
5. All other chemical manufacturing equipment		11	
1) Bucket elevator	1		Casing and bucket damaged
2) Acid circulating tank	1		Corroded: irom band broken
3) Dust settling vessel	2		Wooden frame corroded will be collapsed at dismantling
4) Exhaust acid tank	1		"
5) "	1		Made of concreate underground
6) Heat exchanger	1		Corroded: will be collapsed at dismantling
7) Dilution tank	1		Corrodee: not used now

8)	Pump	2	Corroded
9)	As tAnk	1	Corroded, not used now
	Grand total	16	

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 773 013

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

No. 3

Number of Reparation Machineries

Name of Plant & Equipment	Number of Machineries Operation	Stop	Total
Caustic soda Plant			
(1) Salt solution Equipment	42	36	78
(2) Electrolysis Equipment	221	277	498
(3) Evaporating Equipment	11	2	13
(4) Hydrochloric acid Equipment	72	165	237
(5) Bleaching powder Equipment	14	4	18
(6) Liquid chlorine Equipment	66	31	97
(7) Electric Equipment	12	10	22
Total	438	525	963
Sulfuric acid Plant			
Total	79	27	106
Grand Total	517	552	1069

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

LIST OF
ELECTRIC MACHINERIES
TO BE AUTHORIZED USE

TAKAOKA PLANT, NIPPON SODA CO., LTD.

NO. 420 MUKAINO-MACHI TAKAOKA CITY

TOYAMA PREFECTURE

CODE NO. : (42-10
42-14

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

LIST OF ELECTRIC MACHINERIES TO BE AUTHORIZED USE

		Number	Size and Capacity
A.	Transformer	3	200 K.V.A.
	"	1	1320 K.V.A.
	"	2	1700 K.V.A.
	Induction Voltage Regulator	1	220 K.V.A.
B.	Rotary Converter	1	1200 K.W.
	"	2	1500 K.W.
	Electric Rectifier	3	5 K.V.A.
C.	Switch Board	3	D.C.
	"	1	200V X 750A
	"	1	3300V X 200A
	"	1	3300V X 300A
	"	2	3300V X 500A
	"	1	3300V X 600A
	" for converter	3	500V X 2000A
	" for cottrell	3	65000V X 100mA
D.	Motors which are coupled with inventoried machineries	37	505 HP
E.	Motors which are not coupled with inventoried machineries	23	267.5 HP
F.	D.C. Generator	0	
G.	A.C. Generator	0	

Note : Machineries to be kept in were-house are none.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

LIST OF MOTORS UNDER 5 H.P.

Type	Maker	H.P.	Cycle	r.p.m.	Number
Close	Meiden E. W.	1	60	1800	1
Open	Shibaura E. W.	2	"	"	1
"	Fuji E. W.	"	"	"	1
Close	"	"	"	"	6
Open	"	3	"	"	11
"	Meiden E. W.	"	"	"	2
Colse	Fuji E. W.	"	"	"	17
"	Hitachi W.	"	"	"	1
Total					40

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

REPORT ON

STATE OF BUILDINGS TO BE DESIGNATED

FOR REPARATIONS PURPOSE

TAKAOKA PLANT, NIPPON SODA CO., LTD.

NO. 420 MUKAINO-MACHI TAKAOKA CITY

TOYAMA PREFECTURE

CODE NO. : (42-10
42-14

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

REPORT ON STATE OF BUILDINGS TO BE DESIGNATED FOR REPARATIONS PURPOSE

	Number of Bldg.	Total floor space(tsubo)
A. Steel frame bldg.	2	340.25
B. Wooden Bldg.	5	875.75
C. Ferro-concrete bldg.	0	
D. Mortar slate bldg.	11	2,359.18
Total	18	3,575.43

Note : Buildings which were canceled for reparations purpose are none.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

HEADQUARTERS
TOYAMA CIVIL AFFAIRS TEAM
APO 301

004 25 August 1949

SUBJECT: Reconversion Permit for Reparation Plant

TO : Governor Toyama Ken

In accordance with memorandum from the SUPREME COMMANDER FOR THE ALLIED POWERS, dtd 12 August 1949 and under the provisions of SCAPIN 1355, dtd 22 November 1946, the Nippon Soda Co., Ltd., Takaoka Plant42-14 is granted a reconversion permit and is hereby permitted to produce at their plant the following aditional items in in the reference of inclosure 1.

FOR THE CHIEF:

I. Incl
Production Permit

JULIUS A. KNIGHT
Captian, Ord.
Economics Officer

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

6 Copies

GENERAL HEADQUARTERS
SUPREME COMMANDER FOR THE ALLIED POWERS
Economic and Scientific Section

[redacted] Date

SUBJECT: Reconversion Permit for Reparations Plant

TO: [redacted]

1. In accordance with Memorandum from the Supreme Commander for the Allied Powers to the Japanese Government, dated 22 November 1946 (SCAPIN-1355), the [redacted] is permitted to produce at [redacted] Factory located at [redacted] the following additional items:

Item	Maximum Quantity
[redacted]	[redacted]
[redacted]	[redacted]

2. The temporary use of the following additional reparations machinery is authorized:

[redacted]	

3. A program will be immediately initiated to substitute non-reparations machinery for reparations machinery in temporary use.

4. The acquisition of material, parts and sub-assemblies as well as the disposition of finished products and the establishment of sales prices will be in accordance with the regulations of the Japanese Government.

5. This permit is issued subject to any and all directives affecting reparations plants which have been issued or may hereafter be issued by the Supreme Commander for the Allied Powers. Reports will be rendered as required by current directives and instructions.

FOR THE CHIEF, ECONOMIC AND SCIENTIFIC SECTION:

W. S. VAUGHAN
Chief, Industry Division

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

Code No.	Name of Machines
42-5-8	Shearing Machine - Rotary Slitting
9	"
10	Shearing Machine - Square
11	Cut-off and Sawing-hack
12	Bending Machine - Plate and Sheet, Press
13	Mechanical - 1 Point Vertical
14	"
17	Shearing Machine - Square
18	Bending Machine - Plate, Shapes
21	Mechanical Press - Friction, Spindle
22	Hydraulic Press - Vertical
23	Polishing and Buffing - Belt
24	"
25	Bending Machine - Plate, Flanging
26	" Plate, Beading
28	Band Saw - Tilting Table
29	Shearing Machine - Square
30	Testing & Measuring Equip. - Strength of Material
31	Manual Press - Floor
40	Grinder - Stand and Snagging
41	Polishing and Buffing - Bench, Double Head
42	Grinder - Stand and Snagging
43	Lathe - Engine, Gap. C.S.D.
44	Drilling Machine - Vertical
45	Furnace - Heating, Elec. (Resistance) 150 K.V.A., 20 K.V.A.
42-5-46	Furnace - Heating, Elec. (Resistance) 150 K.V.A., 20K.V.A.
47	Bending Machine - Plate, Smoothing
50	Compressor - Reciprocating, Cir. Single Acting
52	Transformer - 3 Phase, 200 K.V.A.,
53	" 170 K.V.A.
57	Shearing Machine - Arrigator, Manual
59	Lathe - Engine, Gap. C.S.D.
60	Oxy. - Acetylene Cutting Machine
61	Drilling Machine - Vertical
62	Lathe - Engine, Gap. I.M.D.
63	Lathe - Engine, I.M.D.
64	"
65	"
66	Planer - Double Head
67	Shaper - Horizontal
68	Manual Press - Floor
69	Milling Machine - Knee, Horizontal
70	Milling Machine - Knee, Vertical
71	Drilling Machine - Bench
72	Cut-off and Sawing-hack
73	Drilling Machine - Bench
74	Welding Machine - Electric, Arc. A.C.
75	Shearing Machine - Square, Manual
76	Sand Blast
77	Transformer - Single Phase, 350 K.V.A.
80	Transformer - Single Phase, 600 K.V.A.
81	"
82	" 15 K.V.A.
83	"
84	" 40 K.V.A.
85	"
86	"

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

GENERAL HEADQUARTERS
SUPREME COMMANDER FOR THE ALLIED POWERS
Economic and Scientific Section

30 August 1949
Date

SUBJECT: Reconversion Permit for Reparations Plant

TO: Kokoku Rayon Pulp Co., Ltd., Nirehara Plant
3,200 Nirehara, Hosoiri-mura, Nehi-gun, Toyama Pref.

1. In accordance with Memorandum from the Supreme Commander for the Allied Powers to the Japanese Government, dated 22 November 1946 (SCAPIN-1355), the Kokoku Rayon Pulp Co., Ltd. is permitted to produce at their Nirehara Factory located at ~~Hosoiri-mura~~ the following additional items:

Item	Maximum Quantity
Stainless steelwares and table wares	9,000 pcs per month
Steel props	2,000 sets " "
Mfg. and repairing of paper and pulp machines	20 " " "
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX

2. The temporary use of the following additional reparations machinery is authorized:

57 items of machinery and equipment as listed on reverse side.

3. A program will be immediately initiated to substitute non-reparations machinery for reparations machinery in temporary use.

4. The acquisition of material, parts and sub-assemblies as well as the disposition of finished products and the establishment of sales prices will be in accordance with the regulations of the Japanese Government.

5. This permit is issued subject to any and all directives affecting reparations plants which have been issued or may hereafter be issued by the Supreme Commander for the Allied Powers. Reports will be rendered as required by current directives and instructions.

FOR THE CHIEF, ECONOMIC AND SCIENTIFIC SECTION:

W. S. VAUGHAN
Chief, Industry Division

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

Code No.	Name of Machines
42-5-8	Shearing Machine - Rotary Slitting
9	"
10	Shearing Machine - Square
11	Cut-off and Sawing-hack
12	Bending Machine - Plate and Sheet, Press
13	Mechanical - 1 Point Vertical
14	"
17	Shearing Machine - Square
18	Bending Machine - Plate, Shapes
21	Mechanical Press - Friction, Spindle
22	Hydraulic Press - Vertical
23	Polishing and Buffing - Belt
24	"
25	Bending Machine - Plate, Flanging
26	" Plate, Beading
28	Band Saw - Tilting Table
29	Shearing Machine - Square
30	Testing & Measuring Equip. - Strength of Material
31	Manual Press - Floor
40	Grinder - Stand and Snagging
41	Polishing and Buffing - Bench, Double Head
42	Grinder - Stand and Snagging
43	Lathe - Engine, Gap. C.S.D.
44	Drilling Machine - Vertical
45	Furnace - Heating, Elec. (Resistance) 150 K.V.A., 20 K.V.A.
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53	" 170 K.V.A.
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60	Oxy. - Acetylene Cutting Machine
61	Drilling Machine - Vertical
62	Lathe - Engine, Gap. I.M.D.
63	Lathe - Engine, I.M.D.
64	"
65	"
66	Planer - Double Head
67	Shaper - Horizontal
68	Manual Press - Floor
69	Milling Machine - Knee, Horizontal
70	Milling Machine - Knee, Vertical
71	Drilling Machine - Bench
72	Cut-off and Sawing-hack
73	Drilling Machine - Bench
74	Welding Machine - Electric, Arc. A.C.
75	Shearing Machine - Square, Manual
76	Sand Blast
77	Transformer - Single Phase, 350 K.V.A.
80	Transformer - Single Phase, 600 K.V.A.
81	"
82	" 15 K.V.A.
83	"
84	" 40 K.V.A.
85	"
86	"

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

HEADQUARTERS
TOYAMA MILITARY GOVERNMENT TEAM
APO 301

004

1 April 1949

SUBJECT: Allocation of Salt for Production of Caustic Soda

THRU : Commanding Officer
Tokai-Hokuriku Military Government Region
APO 710

TO : Commanding General
Eighth Army
APO 343
ATTN: Military Government Section

1. The Nippon Soda Co., Takaoka Plant and the Toa Gosei Co., Fushiki Plant, both located in Toyama Ken are producing caustic soda and during the months of April, May, and June there is anticipated to be a surplus of electric powers available in this prefecture for companies producing caustic soda.

2. These companies, as of this date, have received no allocation of salt to produce caustic soda for the month of April, and it is estimated by them that with present stocks on hand that they will be able to operate only until 5 April. Both of these companies have submitted applications for their regular allocation of salt as well as for an additional allocation of salt for the month of April, May and June to the Central Government but as of this date have received no notice of approval or disapproval. If these allocations are approved the excess electricity which is expected to be available during these months will not only be utilized, but for at least a three month period, additional workers will be employed.

3. It is estimated by the two companies that the following amounts of raw salt can, and will be consumed, if the application is approved, during the months of April, May and June.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

BASIC: Ltr, Hq Toyama Mil Govt Team, APO 301, dtd 1 Apr 49, Subj: "Allocation of Salt for Production of Caustic Soda", File No. 004

	Nippon Soda Co. Takaoka Plant		Toa Gosei Co. Fushiki Plant	
	Salt Required	Anticipated Production	Salt Required	Anticipated Production
APRIL	560,000 Kgs	280,000 Kgs	720,000 Kgs	400,000 Kgs
MAY	560,000 Kgs	280,000 Kgs	810,000 Kgs	450,000 Kgs
JUNE	560,000 Kgs	280,000 Kgs	810,000 Kgs	450,000 Kgs
TOTAL	1,680,000 Kgs	840,000 Kgs	2,340,000 Kgs	1,300,000 Kgs

4. This headquarters has been informed that during April two (2) ships with cargoes of salt from Chinese territory are expected to arrive at Fushiki Port, Toyama Ken. If some of this cargo could be allocated to these two companies a great saving would result in transportation costs. The Toa Gosei Co., Fushiki Plant is located at Fushiki Port and the Nippon Soda Co., Takaoka Plant is approximately three (3) miles from the harbor.

5. Due to the facts set forth in the above paragraphs, this headquarters feels that approval of the allocations of salt asked for by these companies would be of help to industry in Toyama Ken.

FOR THE COMMANDING OFFICER:

OVID E. SCOTT
Major, FA
Adjutant

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

Economics

Reports Control Symbol
48/E/IR/5

HEADQUARTERS
TOYAMA MILITARY GOVERNMENT TEAM
APO 301

004

7 July 1948

SUBJECT: Damage to Machines under Reparational Control and Custody

THRU : Commanding Officer
Tokai-Hokuriku Military Government Region
APO 710

TO : Commanding General
Eighth Army
APO 343
ATTN: Military Government Section

1. Nippon Soda Co, Takaoka Plant, Code Number 42-10, reports following equipment in their Hydrochloric Acid plant was damaged by earthquake 28 June 1948.

Code No.	Item	No. of Items
4	Combustion Tubes	4
10	Absorption Vessels	1
12	Traps	2

2. Items listed are being repaired and since damage was slight, will be ready for use in very near future.

FOR THE COMMANDING OFFICER:

OVID E. SCOTT
Major, FA
Adjutant

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

Application to move Machinery

May 20 , 1948

1. Name of Plant requesting Movement :

Takaoka Plant, Nippon Soda Co., Ltd.

2. Address of Plant :

No. 420, Mukaino-machi, Takaoka City, Toyama Pref.

3. Machinery to be moved. :

a. Name, size and number of machinery ;

Name	Size	Number
Roll crusher	15" X 16"	1

b. Where now located ;

Our electrode plant

c. Owned by whom ;

Takaoka Plant, Nippon Soda Co., Ltd.

d. Where it will be moved to :

Our sulphuric acid plant

4. Reason for request :

We expect to rise up sulphur yield and then to increase the production of sulphuric acid by crushing low quality pyrite. For this purpose, we hope to use this roll crusher.

This roll crusher was not designated for reparation.

I certify the information in this application is true and correct

Signed [signature]
TADAYOSHI TODA
Superintendent

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

5. Recommendation by the Reparation Section of Toyama Ken :

Movement of machinery requested in this application is
(approved) (~~dis-approved~~) for the following reason;

This machinery --- under heading No. 3 --- was
not ear-marked for reparation.

Signed Kiyoshi Sakai

6. Permission (is) (~~is not~~) hereby granted to move machinery as requested in this application.

Signed [illegible]

[illegible] Authorized to granted permission for movement of machinery.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

HEADQUARTERS
TOYAMA MILITARY GOVERNMENT TEAM
APO 713

601

23 January 1948

SUBJECT: Approval to Move Machines

THRU : Toyama Liaison Office
Nippon Soda Co., Takaoka Plant

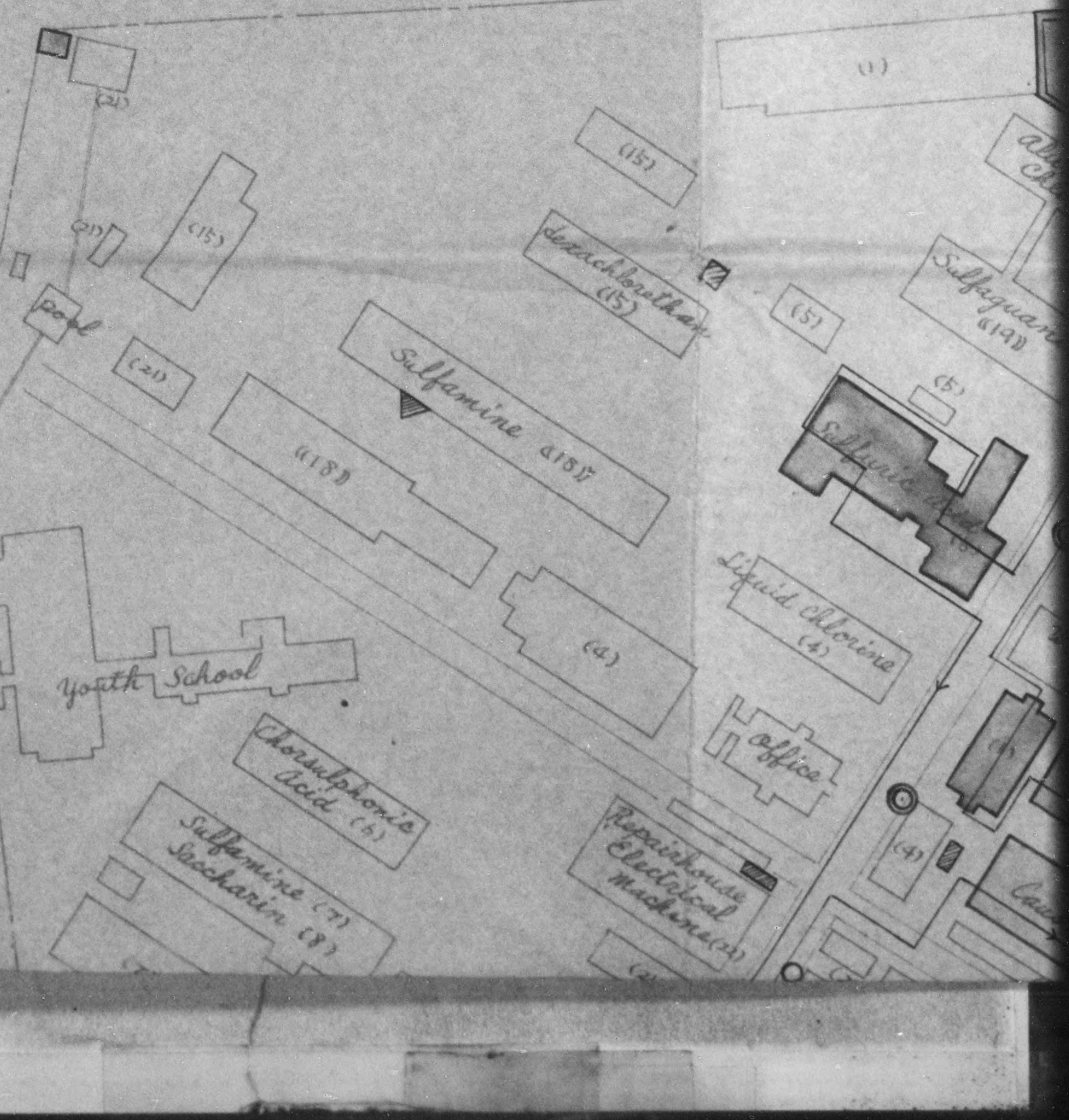
TO : Nippon Light Metal Co. Ltd., Niigata Works

The application to move the seven (7) filter presses owned by your company, from the Nippon Soda Co., Takaoka Plant, which was submitted by you is herewith approved.

BY ORDER OF LIEUTENANT COLONEL GARY:

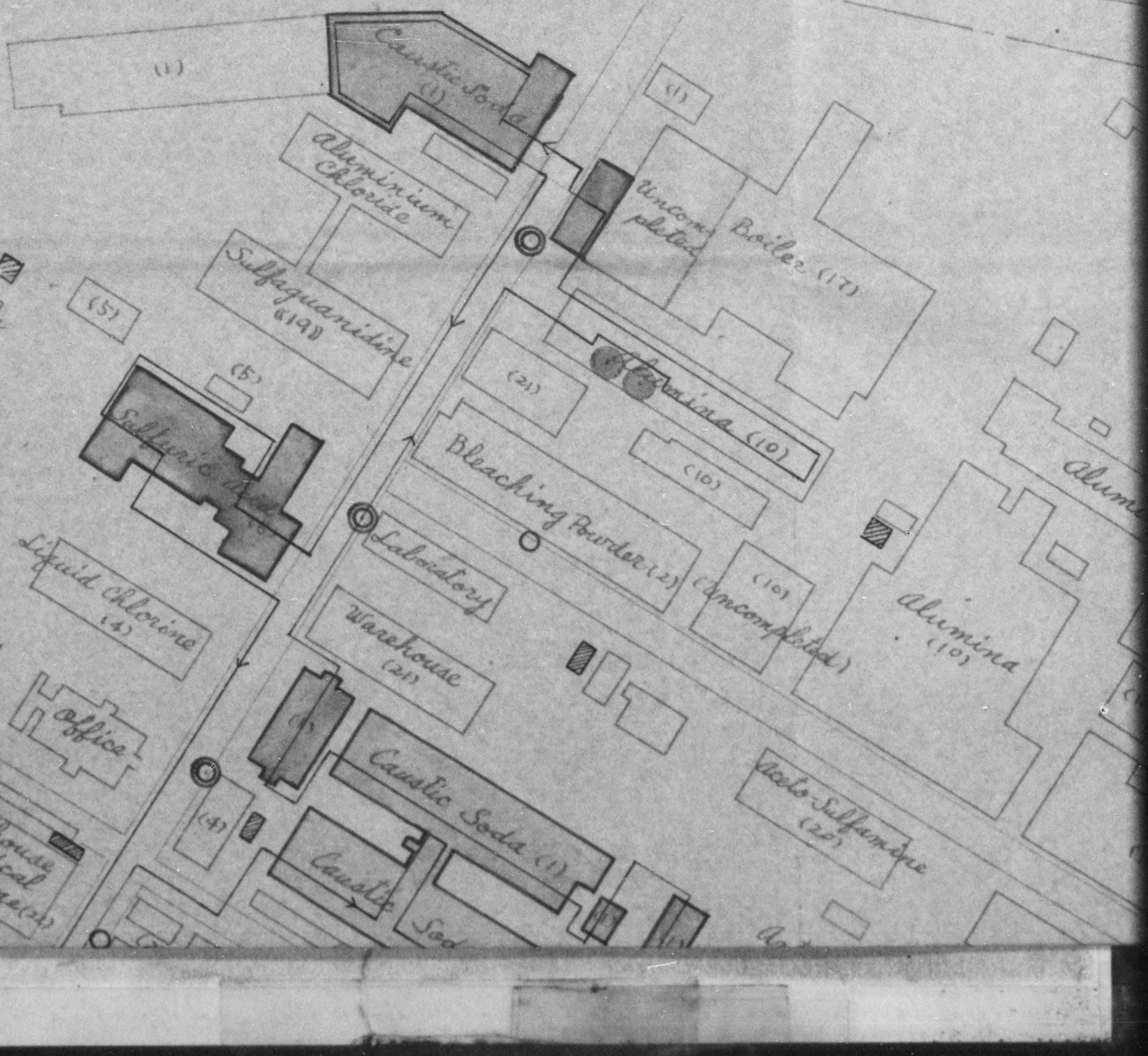
VIRGIL L. CORDELL
Captain, AC
Economics Officer

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013



DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

Oyabe River



DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

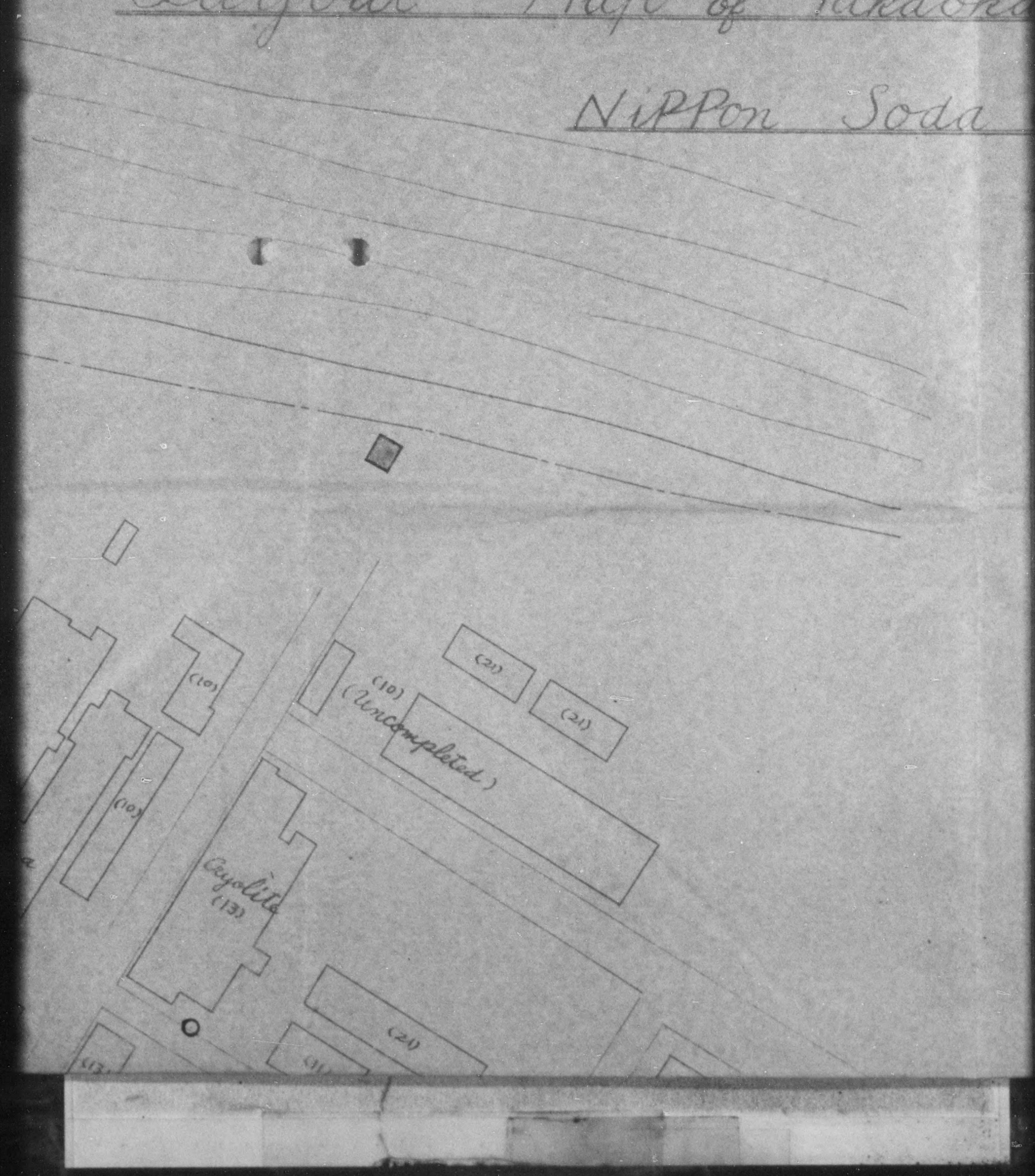
Layout

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

1

Layout Map of Takaoka

NiPPon Soda

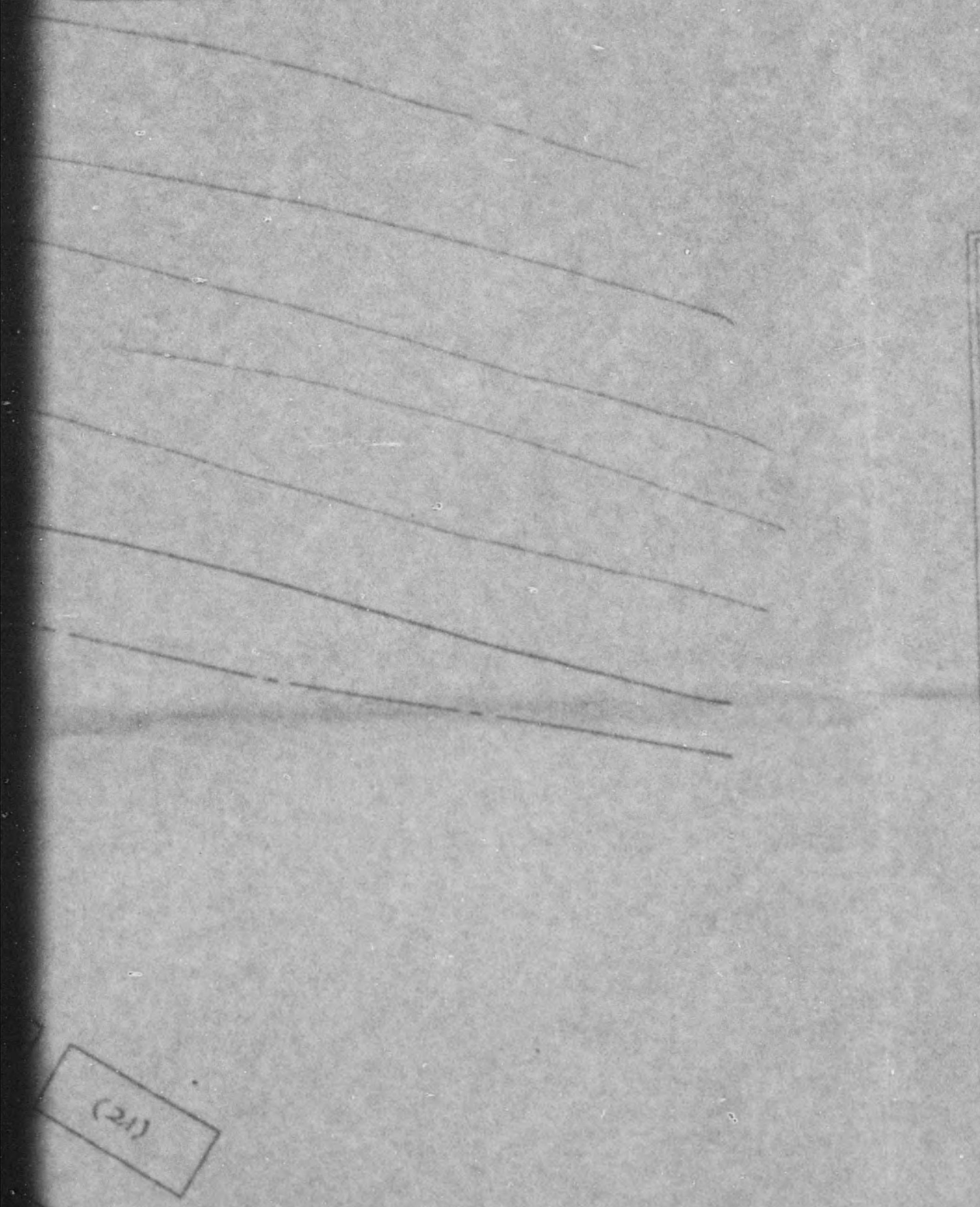


DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

Map of Takaoka Plant

NiPPon Soda Co., Ltd.

S. 1/12



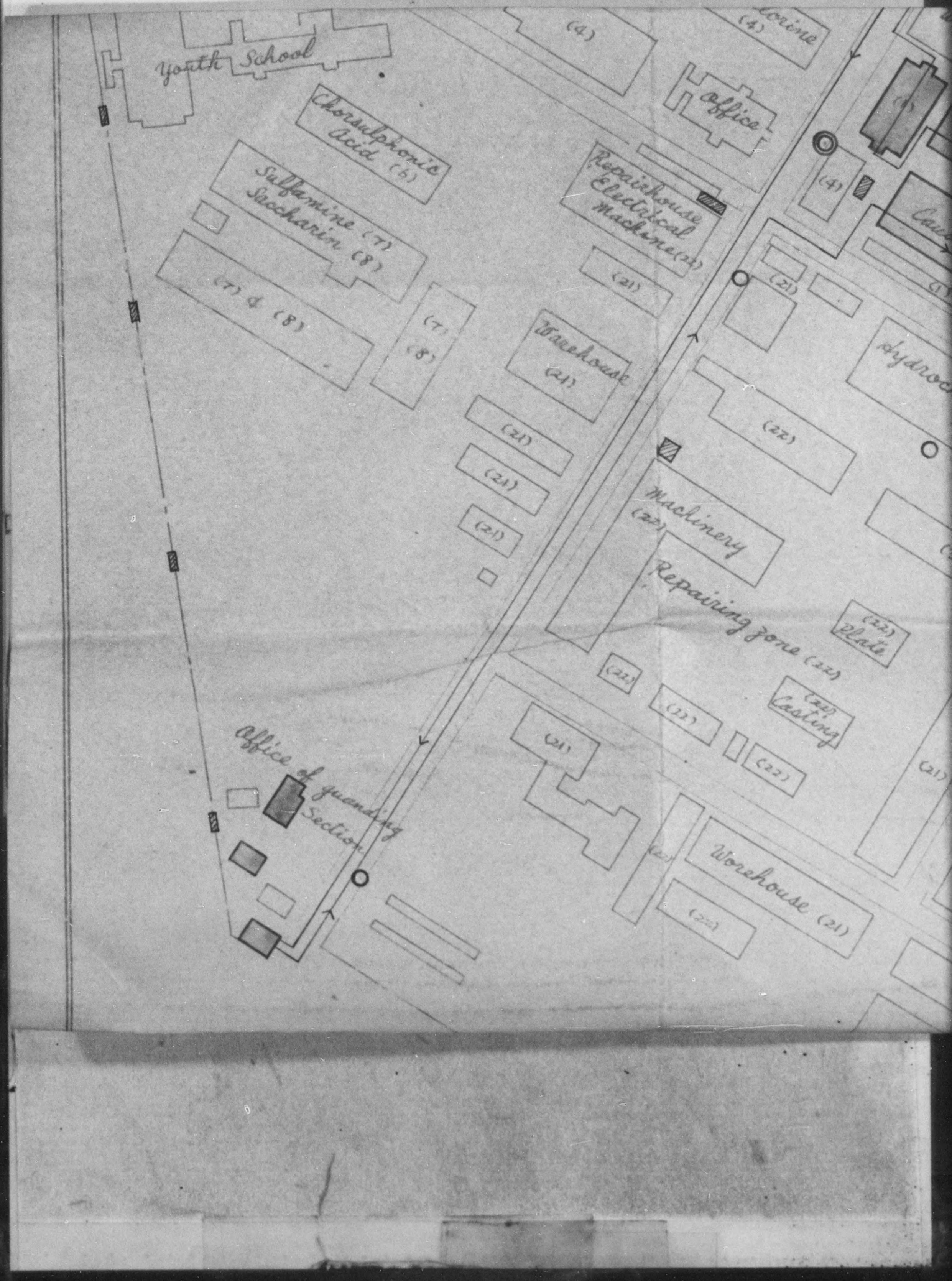
1	Caustic Soda Plant
2.	Bleaching Powder Plant
3	Hydrochloric Acid Plant
4	Liquid Chlorine Plant
5.	Sulfuric Acid Plant
6.	Chlorsulphonic Acid Plant
7.	Sulfamine Plant
8	Saccharin Plant
9.	Aluminium Plant
10	Alumina Plant
11	[illegible]

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

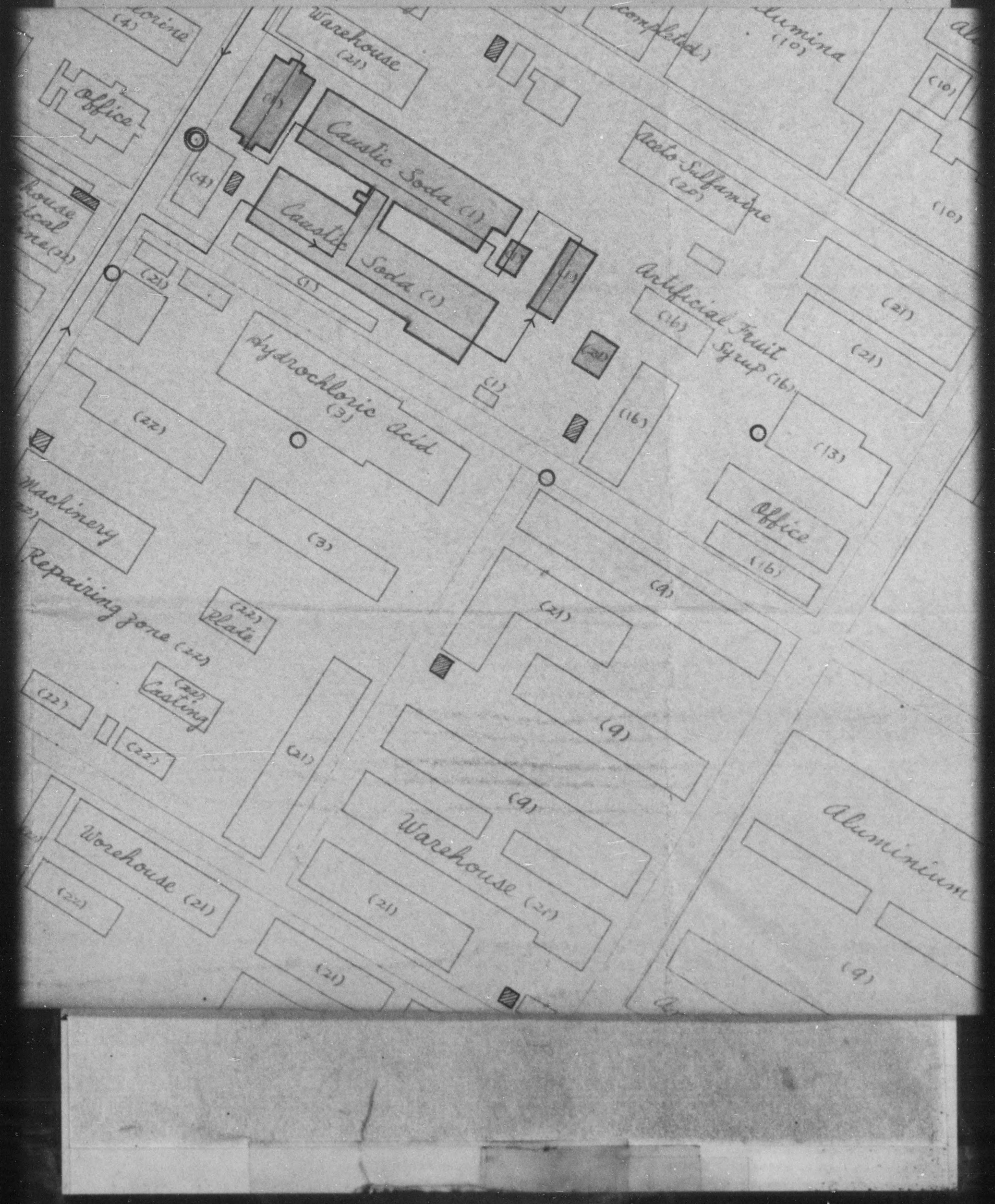
S-1/1200

Soda Plant	12.	Anode Electrode (Paste) Plant
ng Powder Plant	13	Cryolite Plant
oric Acid Plant	14	Aluminium Chloride Plant
Chlorine Plant	15.	Hexachlorethan Plant
ic Acid Plant	16.	Artificial Fruit Syrup Plant
ulphonic Acid Plant	17.	Boiler Plant
mine Plant	18.	Sulfamine Plant
arin Plant	19	Sulfaguanidine Plant
nium Plant	20	Aceto-Sulfamine Plant
ina Plant	21	Warehouse

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013



DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013



DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

8	Saccharin Plant	19	Sulfaguan
9	Aluminium Plant	20	Aceto-Sulfa
10	Alumina Plant	21	Warehou
11	Anode Electrode (Block) Plant	22	Others

note: « »------sign of conversion

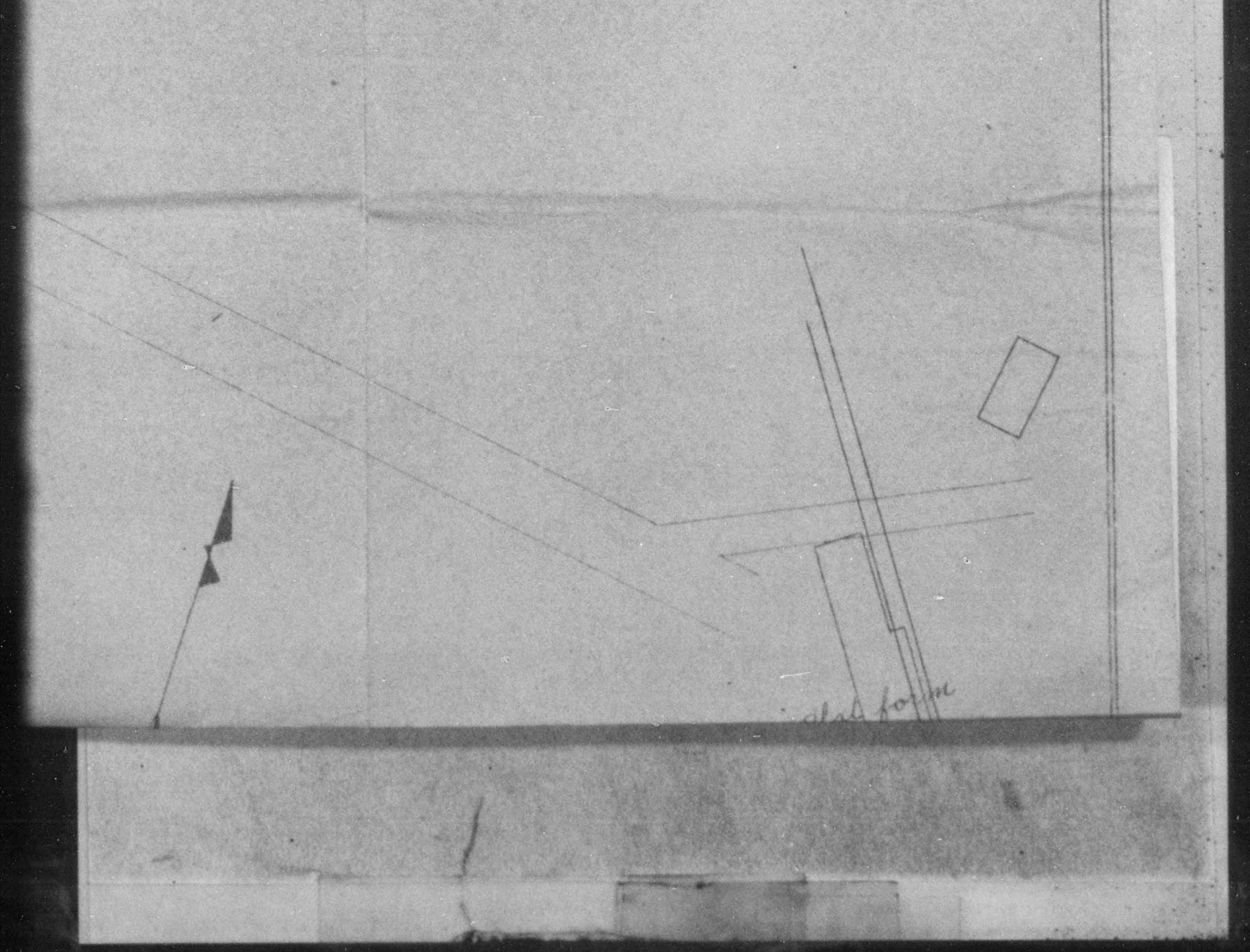
(21)

completed)

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

Plant	19	Sulfaguanidine Plant
Plant	20	Aceto-Sulfamine Plant
Plant	21	Warehouse
(Block) Plant	22	Others

---sign of Conversion



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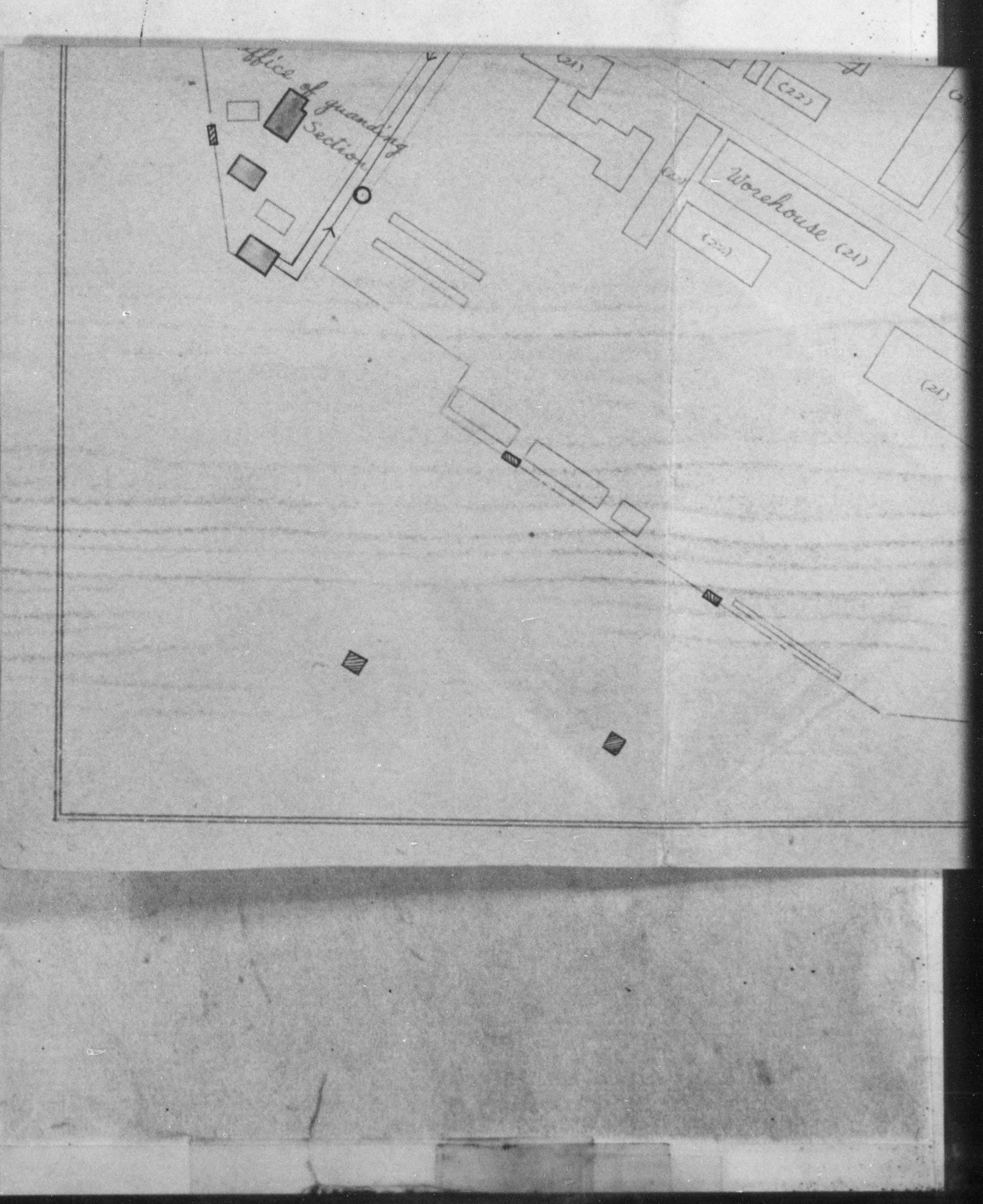
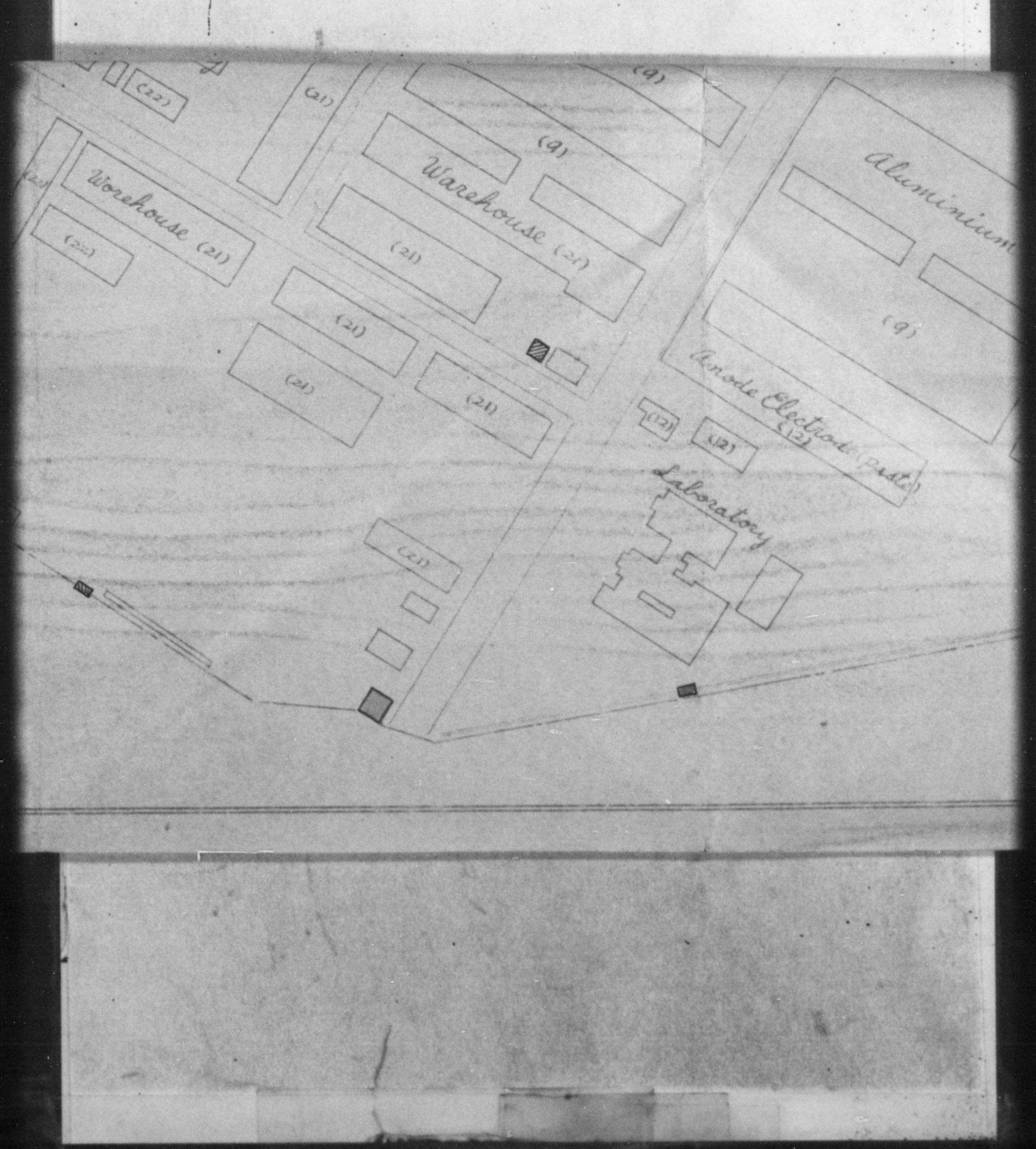


DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013



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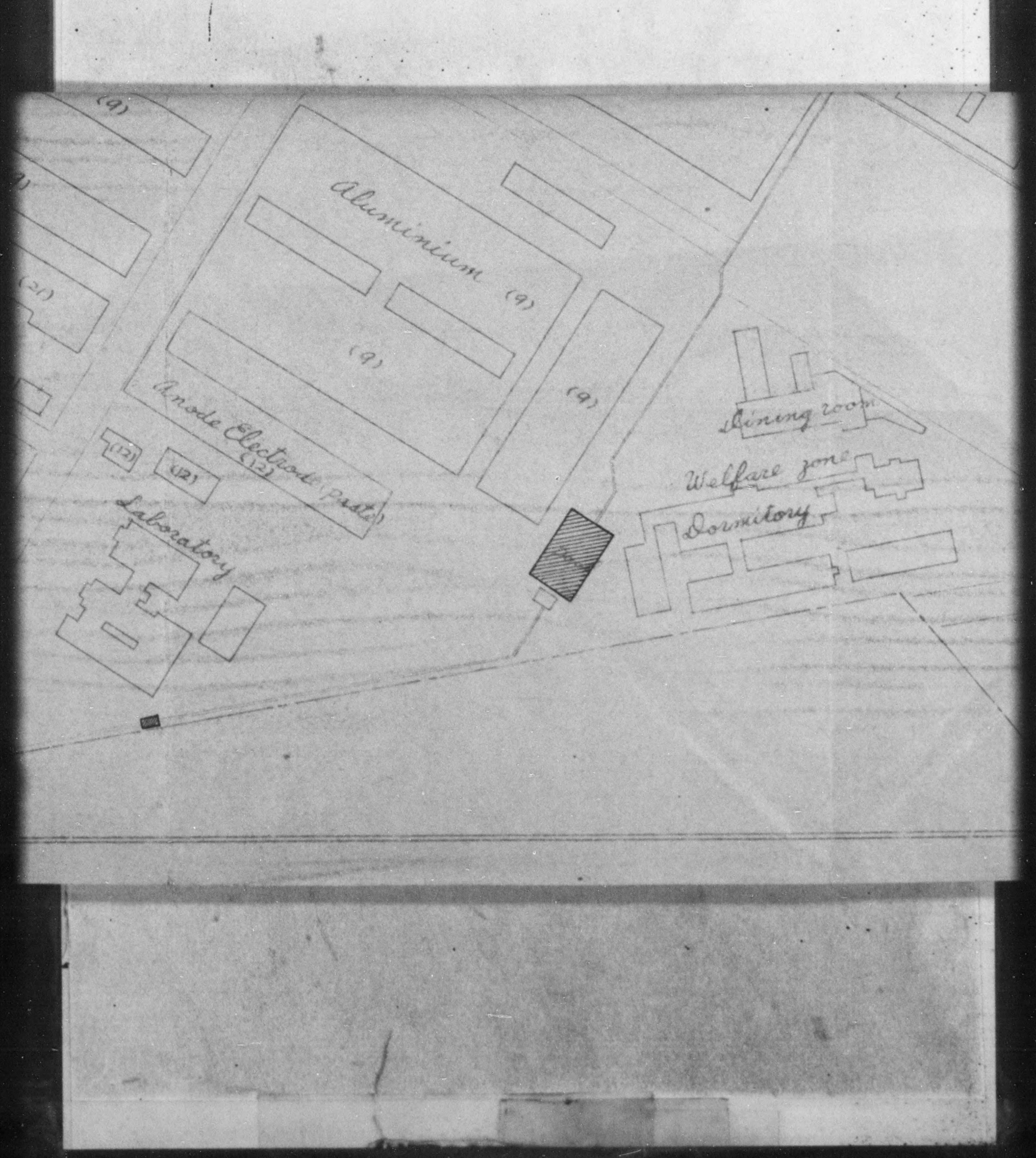

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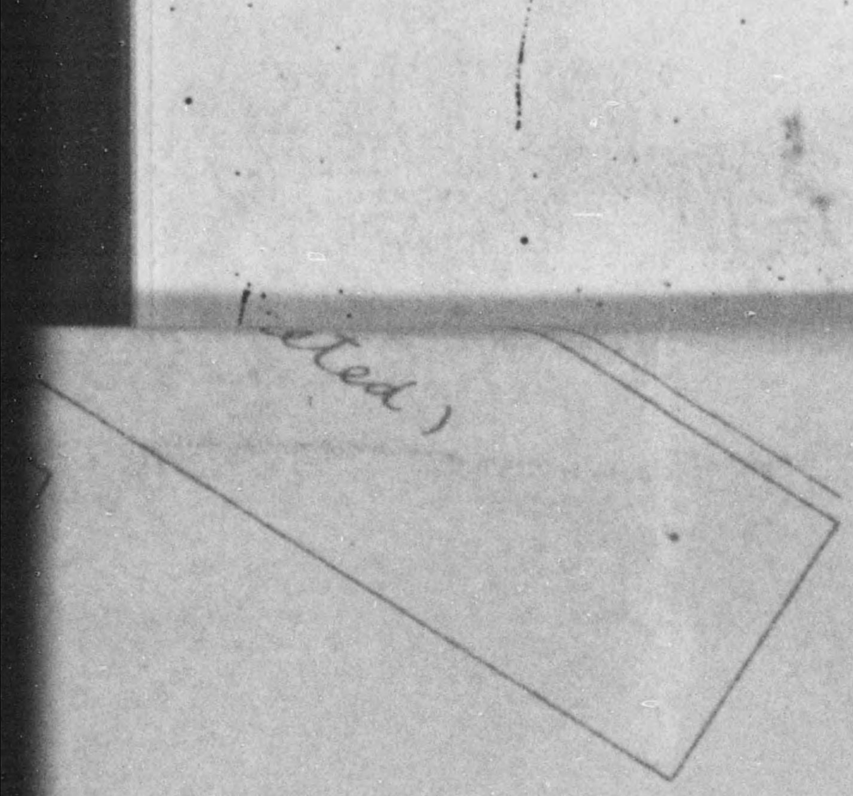

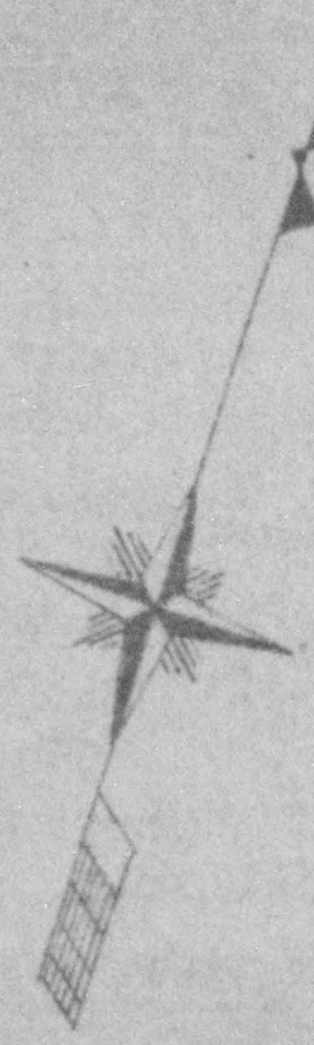

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 773013

LIST

OF

MACHINERIES AND EQUIPMENTS

OF

CHLORINE RECOVERING PLANTS

TAKAOKA PLANT NIPPON SODA CO., LTD.

NO. 420 MUKAINO-MACHI TAKAOKA CITY

OF

CHLORINE RECOVERING PLANTS

TAKAOKA PLANT NIPPON SODA CO., LTD.

NO. 420 MUKAINO-MACHI TAKAOKA CITY

TOYAMA PREFECTURE

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

(1) Hydrochloric acid plant

Name of machineries	Number	Capacity and size	Maker's name	Code No.
1. Cock	16	65 m/m ø porcelain	Takayama Kozan Co.	
2. Burner jet	2	80 m/m ø, 35%acid 2.5T/D, fused-silica	Shibaura E. Co.	
[redacted] "	1	45 m/m ø, 35%acid 1 T/D, fused-silica		
4. Combusion tube	24	200 ø X 1,300 m/m, 35%acid20T/D, fused-silica	Shimazu W.	
5. Bend	12	200 ø, fused-silica	"	
6. "	4	" , porcelain	Takayama Kozan Co.	
7. "	5	" , fused-silica	Shimazu W.	
8. "	51	" , porcelain	Takayama Kozan Co.	
9. Absorption vessel	45	" , fused-silica	Shimazu W.	
10. "	27	" , porcelain	Takayama Kozan Co.	
11. Trap	3	" , fused-silica	Shimazu W.	
12. "	4	" , porcelain	Takayama Kozan Co.	
13. Tower section	5	" , "	"	
14. "	11	" , fused-silica	Shimazu W.	
15. Absorption tower	5	600 ø X 3,000 m/m porcelain	Takayama Kozan Co.	
16. Receiver	2	500 L, porcelain	Nippon Gaishi Co.	
17. Measuring bottle	10	35%acid 27kg, porcelain	Takayama Kozan Co.	
18. Assembling bottle	1	1,000 L, porcelain	"	
19. Air compressor	1	6" X 6"	Hitachi W.	XIIIB1 - 2
20. Compressed air tank	1	1,000 ø X 1,500 m/m	Home-made	
21. Fan	1	150 m/m ø, 6 m^3/min	Endo Co.	

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 773013

9. Absorption vessel	45	" , fused-silica	Shimazu W.	
10. "	27	" , porcelain	Takayama Kozan Co.	
11. Trap	3	" , fused-silica	Shimazu W.	
12. "	4	" , porcelain	Takayama Kozan Co.	
13. Tower section	5	" , "	"	
14. "	11	" , fused-silica	Shimazu W.	
15. Absorption tower	5	600 ø X 3,000 m/m porcelain	Takayama Kozan Co.	
16. Receiver	2	500 L, porcelain	Nippon Gaishi Co.	
17. Measuring bottle	10	35% acid 27kg, porcelain	Takayama Kozan Co.	
18. Assembling bottle	1	1,000 L, porcelain	"	
19. Air compressor	1	6" X 6"	Hitachi W.	IIIB1 - 2
20. Compressed air tank	1	1,000 ø X 1,500 m/m	Home-made	
21. Fan	1	150 m/m ø, 6 m^3/min	Endo Co.	
22. Exhauster	1	150 m/m ø, 40 m^3/min porcelain	Takayama Kozan Co.	
23 Pump	1	Turbin, 1½" ø, porcelain	Home-made	IIIB2 - 31
24. Motor	1	2 HP, 1,440 r/m	Fuji E. Co.	
25. "	1	" , 1,730 r/m	"	
26 "	1	3 HP, "	"	
27 "	1	" , "	"	

Remarks : 1. No. 11 Trap 3 Damaged and impossible to use

2. No. 14 Tower section 3 are damaged and impossible to use.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

(2) Bleaching powder plant

	Name of machineries	Number	Capacity and size	Maker's name	Code No.
1.	Exhauster	1	150 m/m ø, 40 m^3/min	Takayama Kozan Co.	
2	"	1	100 m/m ø, 13 m^3/min	"	
3.	Reaction chamber	5	9000 X 11,000 X 1,800 m/m 2.7 T/charge, concrete	Home-made	
4.	Stirrer	2	2,100 X 2,100 X 2,400 m/m 20 r/m	"	
5.	Pump	2	5"ø, 30 m, 2 m^3/min	Aporo I. W.	IIIB2-32 -33
6.	Fan	1	4" ø, 6 m^3/min	Sato Kogyo Co.	
7.	Motor	1	2 HP, 1,700 r/m	Shibaura E. Co.	
8.	"	2	5 HP, 1,150 r/m	Fuji E. Co.	IIA2-12 -13
9.	"	1	" , 1,700 r/m	"	IIA2-11
10.	"	1	10 HP, 1,165 r/m	"	(IIIB2-32)
11.	"	1	20 HP, 965 r/m	"	(IIIB2-33)

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 773 013

(3) Liquid chlorine plant

Name of machineries	Number	Capacity and size	Maker's name	Code No.
1. Drying tower	4	600 ø X 3,100 m/m X 2 3 tons Cl_2/day	Nippon Gaishi Co.	
2. Acid separator	4	600 ø X 750 m/m	Adachi I. W.	
3. Acid circulating tank	4	750 ø X 1,200 m/m	"	
4. Pump	4	Centrifugal 50 m/m ø X 10 m, 10m^3/H	Home-made	IIIB2-34 -35 -36 -37
"	1	"	"	
5. Acid storage tank	1	1,200 ø X 2,000 m/m	Tashiro Co.	
6. Ammonia compresser	1	235 r/m, 18.5 T/-10°C closed	Tajiri Kikai Kogyo Co.	IIIB1-3
7. "	1	215 r/m, 36.5 T/-10°C closed	"	IIIB1-4
8. "	1	300 r/m, 8.5 T/-10°C closed	"	IIIB1-5
9. Boosyer	1	750 r/m, 280m^3/H, closed	Tashiro Co.	IIIB1-6
10. "	1	" , 560 " , "	"	IIIB1-7
11. "	1	" , 190 " , "	"	IIIB1-8
12. Ammonia cooler	1	510 ø X 1,500 m/m	"	
13. Ammonia condenser	1	750 ø X 5,000 m/m, 50 ø X 5,000 m/m X 75pipes 45 tons	"	
14. "	1	500 ø X 4,600 m/m, 50 ø X 4,600 m/m X 35pipes 20 tons	"	
15. Ammonia receiver	1	250 ø X 4,200 m/m	"	

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 773 013

		closed	Koyo Co.	IIIB1-3
7. "	1	215 r/m, 36.5 T/-10°C closed	"	IIIB1-4
[redacted] "	1	300 r/m, 8.5 T/-10°C closed	"	IIIB1-5
9. Boosyer	1	750 r/m, 280m³/H, closed	Tashiro Co.	IIIB1-6
10. "	1	" , 560 " , "	"	IIIB1-7
11. "	1	" , 190 " , "	"	IIIB1-8
12. Ammonia cooler	1	510 ø X 1,500 m/m	"	
13. Ammonia condenser	1	750 ø X 5,000 m/m, 50 ø X 5,000 m/m X 75pipes 45 tons	"	
14. "	1	500 ø X 4,600 m/m, 5o ø X 4,600 m/m X 35pipes 20 tons	"	
15. Ammonia receiver	1	250 ø X 4,200 m/m	"	
16. "	1	400 ø X 3,600 m/m	"	
17. Brine cooler	2	600 ø X 2,400 m/m 50 ø X 2,400 m/m X 53pipes	"	
18. "	1	500 ø X 1,800 m/m	"	
19. Brine tank	1	1,850 X 3,000 X 1,850 m/m	"	
20. "	1	500 X 1,000 X 800 m/m	"	
21. Vacuum compresser	2	50 m/m ø, 15 m/m Hg 5.8 m³/min	Tajiri Kikai Co.	
22. "	1	25 m/m ø, 8 m/m Hg 0.8 m³/min	"	
23. Gas precooler	4	300 ø X 1,800 m/m 38 ø X 1,800 m/m X 22pipes	Tashiro Co.	

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DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 773 013

	Name of machineries	Number	Capacity and size	Maker's name	Code No.
24.	Acid cooler	1	400 ø X 1,800 m/m	Tashiro Co.	
25.	"	1	350 ø X 1,800 m/m	"	
26.	"	1	250 ø X 1,950 m/m	"	
27.	Acid separator	2	300 ø X 500 m/m X 3	"	
28.	"	1	220 ø X 550 m/m X 3	"	
29.	Gas liquefier	1	425 ø X 4,850 m/m 38 ø X 4,850 m/m X 36pipes	"	
30	"	1	450 ø X 2,600 m/m	"	
31.	Storge tank	3	1,310 ø X 4,850 m/m 32 ø X 4,000 m/m X 8pipes	"	
32.	"	1	1,000 ø X 3,500 m/m 32 ø X 3,500 m/m X 8pipes	"	
33.	Discharge tank	4	600 ø X 1,800 m/m 32 ø X 2,250 m/m X 4pipes	"	
34.	"	1	600 ø X 1,200 m/m	"	
35.	Air compresser	1	2 cylinders, 400 r/m, 16.5 m^3/H, 8kg/cm^2	" Tajiri kikai Co.	IIIB1-9
36.	Air receiver	1	1,000 ø X 1,500 m/m, 10kg/cm^2	Tashiro Co.	
37.	Air drying tank	1	600 ø X 900 m/m	"	
38.	Blower	2	600 m/m ø, 200 m^3/min	Seki Kikai Co.	
39.	Pump	2	Centrifugal, 75 m/m ø, H. 10 m, 0.5 m^3/min	Miura W.	IIIB2-38 -39
40.	"	1	Centrifugal, 50 m/m ø, H. 10 m, 0.2 m^3/min	Home-made	IIIB2-40
41.	"	3	Centrifugal, 75 m/m ø,	Toyo Kikai Co.	IIIB2-41

		32 ø X 3,500 m/m X 8pipes		
33. Discharge tank	4	600 ø X 1,800 m/m 32 ø X 2,250 m/m X 4pipes	"	
34. "	1	600 ø X 1,200 m/m	"	
35. Air compresser	1	2 cylinders, 400 r/m, 16.5 m^3/H, 8kg/cm^2	" Tajiri kikai Co.	IIIB1-9
36. Air receiver	1	1,000 ø X 1,500 m/m, 10kg/cm^2	Tashiro Co.	
37. Air drying tank	1	600 ø X 900 m/m	"	
38. Blower	2	600 m/m ø, 200 m^3/min	Seki Kikai Co.	
39. Pump	2	Centrifugal, 75 m/m ø, H. 10 m, 0.5 m^3/min	Miura W.	IIIB2-38 -39
40. "	1	Centrifugal, 50 m/m ø, H. 10 m, 0.2 m^3/min	Home-made	IIIB2-40
41. "	3	Centrifugal, 75 m/m ø, 0.5 m^3/min	Toyo Kikai Co.	IIIB2-41 -42 -43
42. Balance	1	Platform type, 150kg	Tanaka Co.	
43. Stirrer	3	1,800 ø X 2,000 m/m	Home-made	
44. Motor	2	3 HP, 1,800 r/m	Fuji E. Co.	
45. "	2	" , "	"	
46. "	2	" , "	Meiden E. Co.	
47. "	1	5 HP, 1,200 r/m	Fuji E. Co.	II B2-15
"	1	" , "	"	(IIIB2-41)
48. "	2	" , 1,800 r/m	"	~~II~~ IIIB2-16 -17
"	2	" , "	"	(IIIB2-42) (-43)
49. "	1	" , "	Hitachi E. Co.	IIIB2-14

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 773 013

	Name of machineries	Number	Capacity and size	Maker's name	Code No.
50.	Motor	2	5 HP, 1,800 r/m	Hitachi E, Co.	(IIIB2-38) (IIIB1- 9)
51.	"	1	7.5 HP, "	Fuji E. Co.	(IIIB2-39)
52.	"	1	15 HP, 900 r/m	Hitachi E. Co.	(IIIB1-5)
53.	"	1	" , 1,200 r/m	Fuji E. Co.	(IIIB1-8)
54.	"	1	25 HP, 900 r/m	"	(IIIB1-6)
55.	"	1	" , 1,800 r/m	Hitachi E. Co.	(IIIB1-3)
56.	"	1	30 HP, 1,200 r/m	Fuji E. Co.	II B2-18
57.	"	1	40 HP, 900 r/m	Hitachi E. Co.	II B2-19
58.	"	1	" , "	Mitsubishi E. Co.	(IIIB1-7)
59.	"	1	50 HP, 900 r/m	"	(IIIB1-4)

Note :

1. Total number of machineries in this list

Hydrochloric acid plant	237
Bleaching powder plant	18
Liquid chlorine plant	97
Total	352

2. ( ) shows the "Code No." of machinery in which the machinery was included on inventory.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

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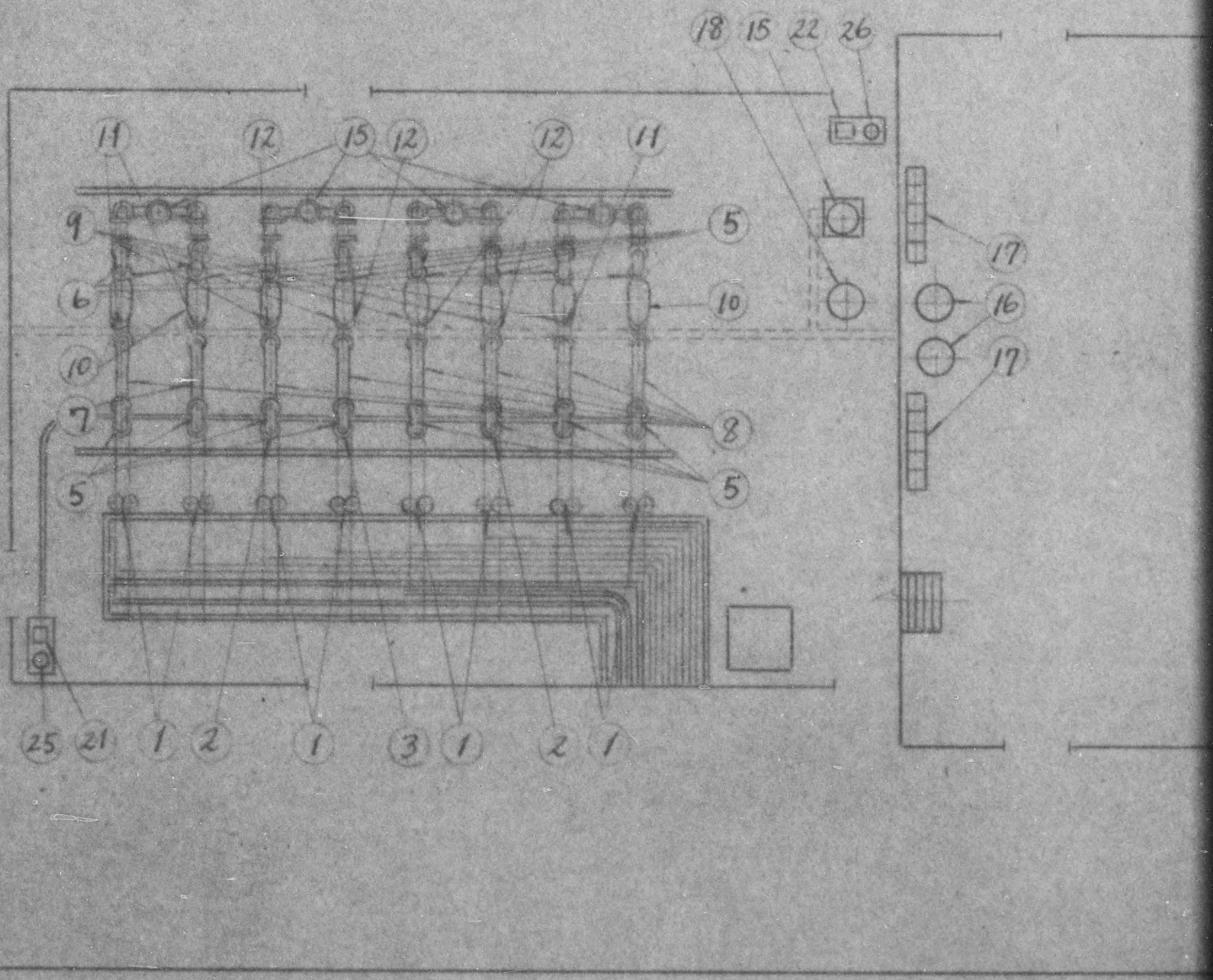
Hydrochloric Acid Equip



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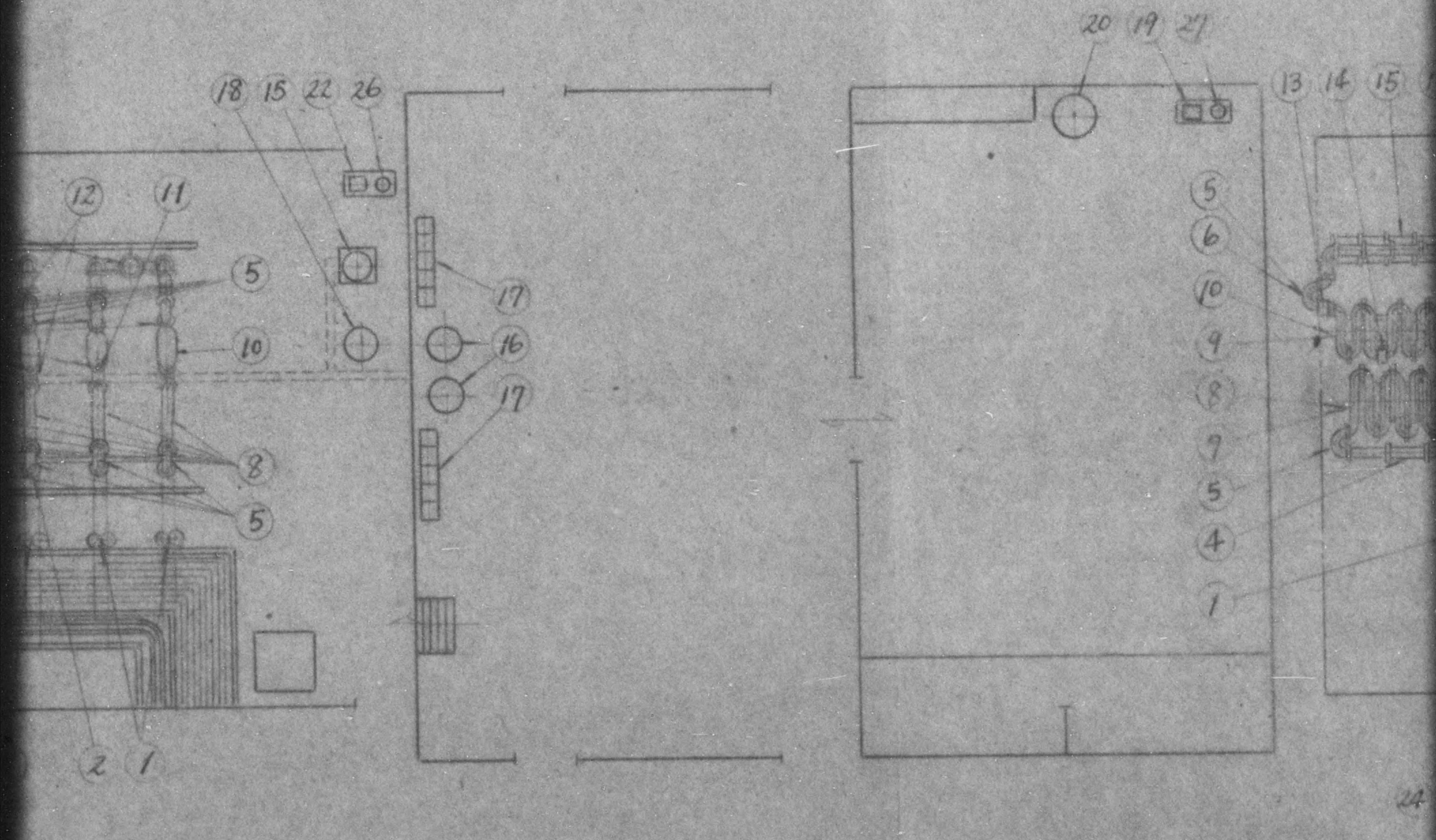
Hydrochloric Acid Equipment



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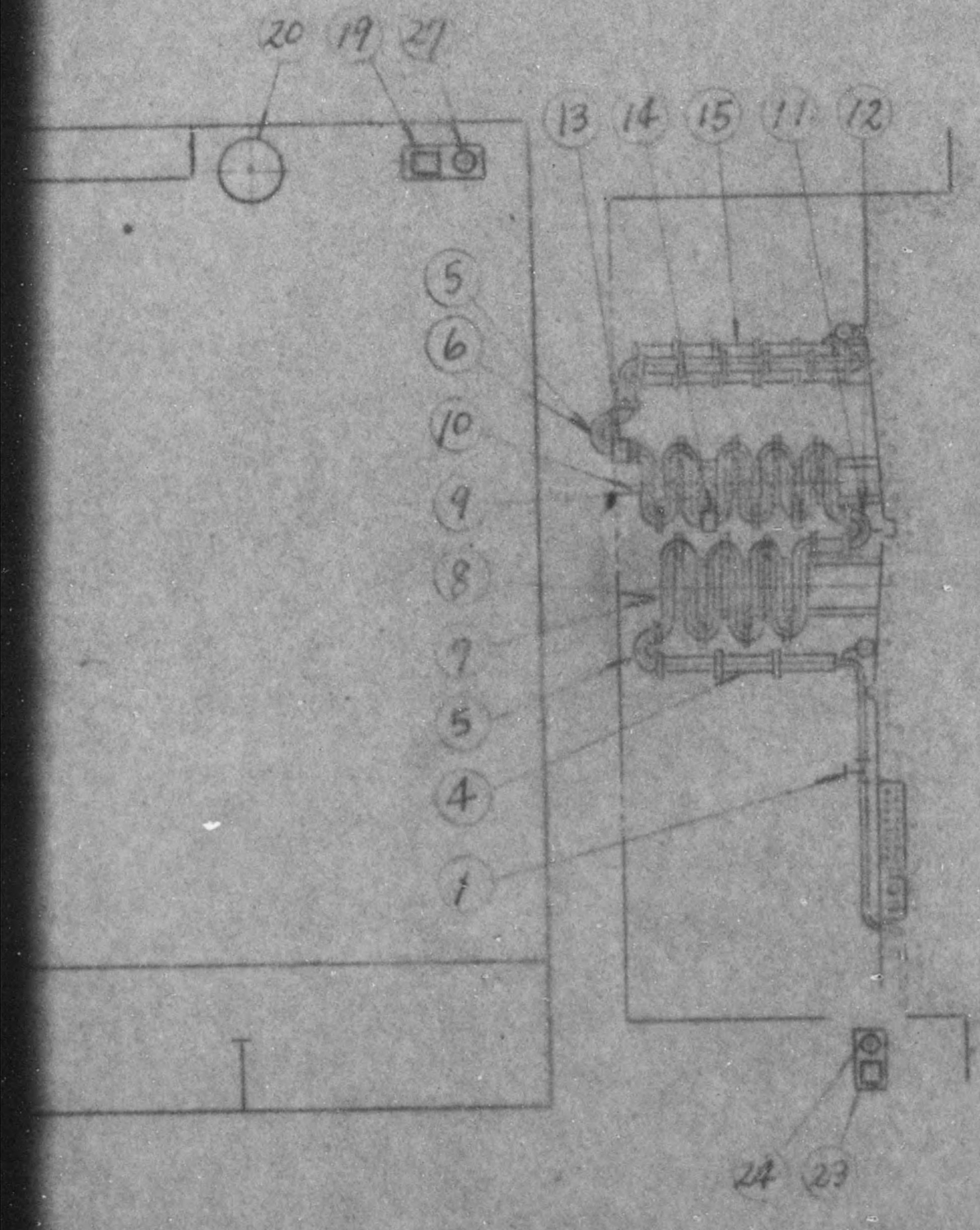
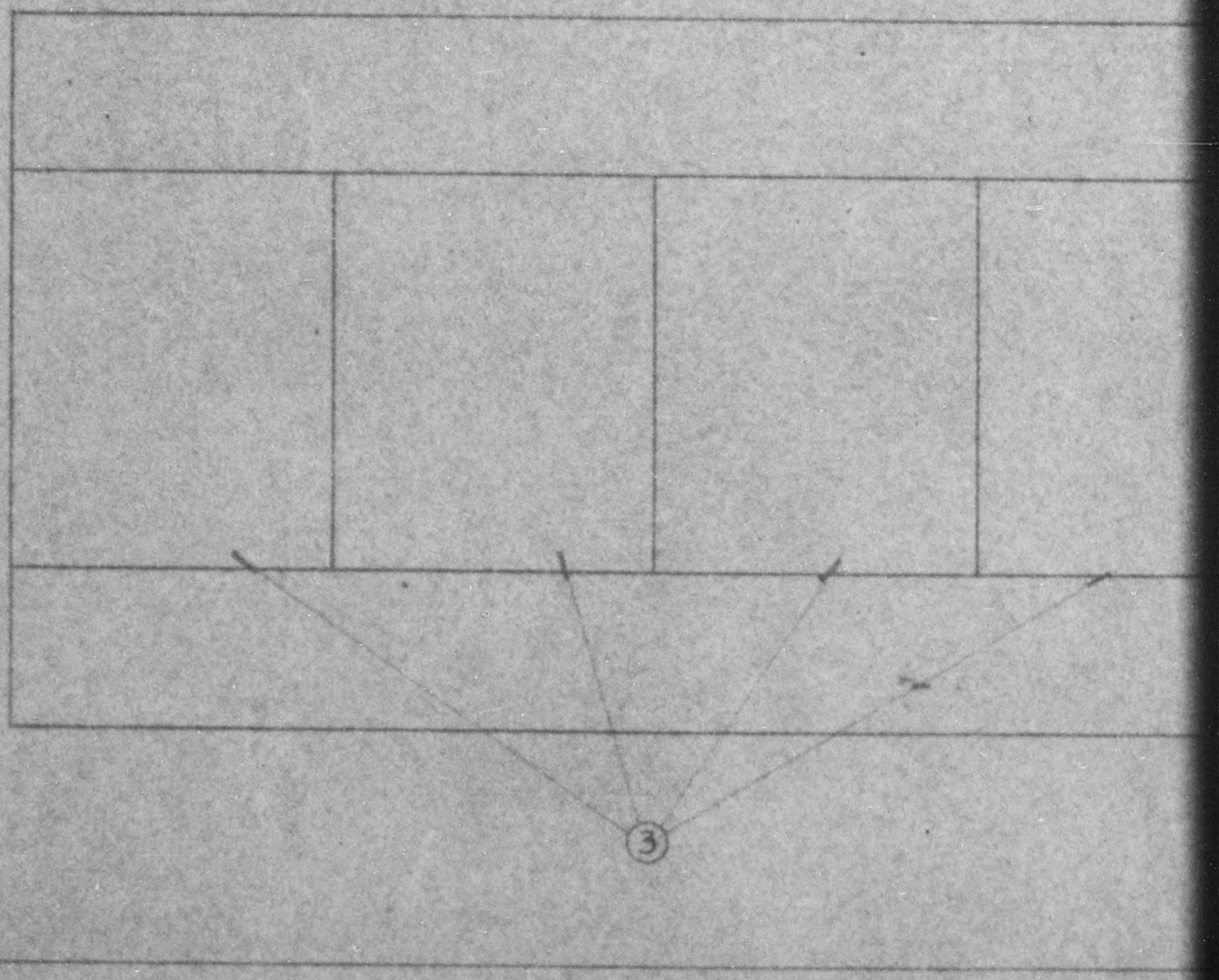


1. Cock
2. 3. Burner jet
4. Combustion tube
5. 6. Bend U type
7. 8. " S "
9. 10. Absorption vessel
11. 12. Trap
13. 14. Tower section
15. Absorption tower
16. Receiver
17. Measuring bottle
18. Assembling bottle
19. Air compressor
20. Compressed air tank
21. Fan
22. Exhauster
23. Pump
24. ~ 27. Motor

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

Bleaching Powde

(2



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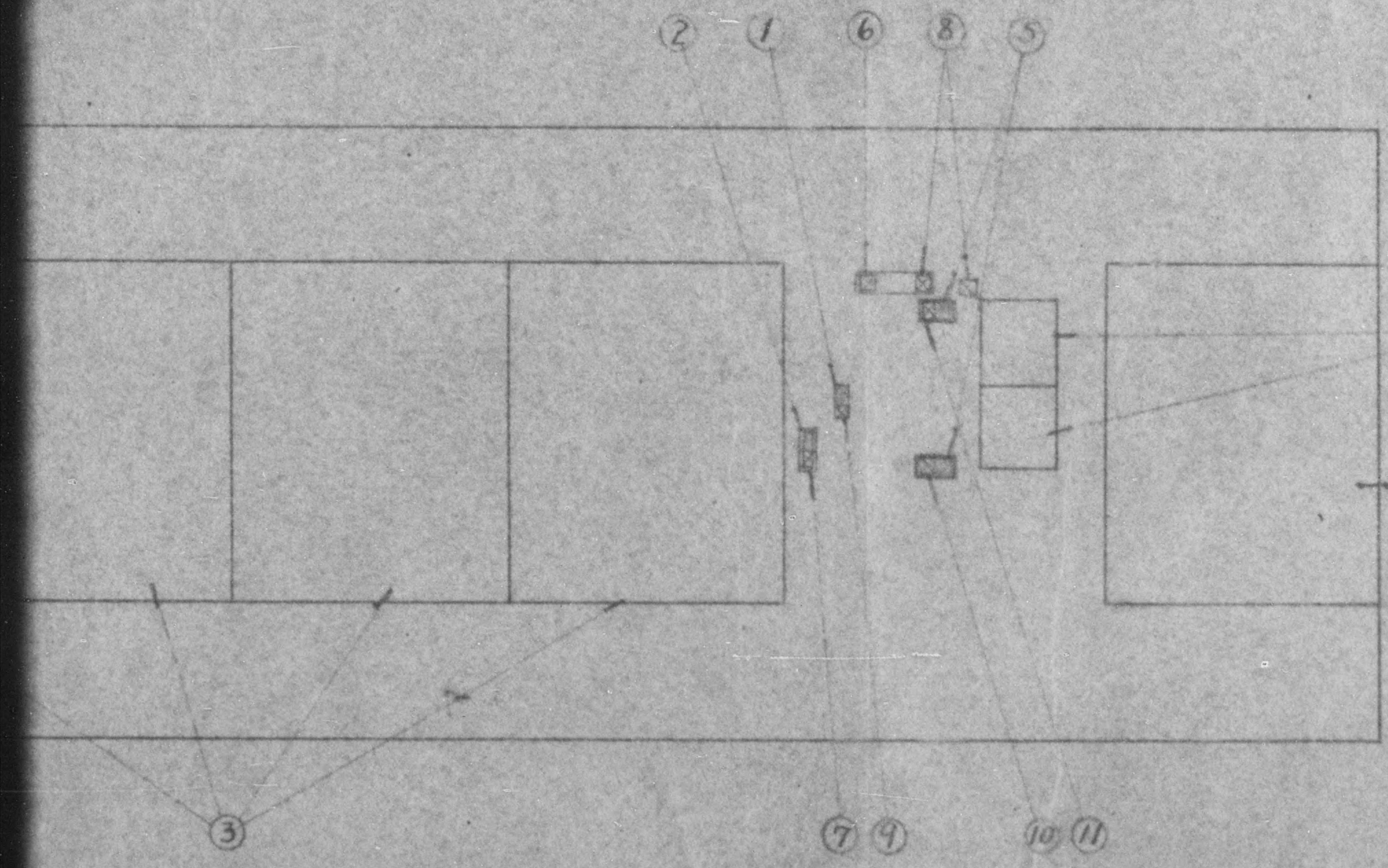
Bleaching Powder Equipment



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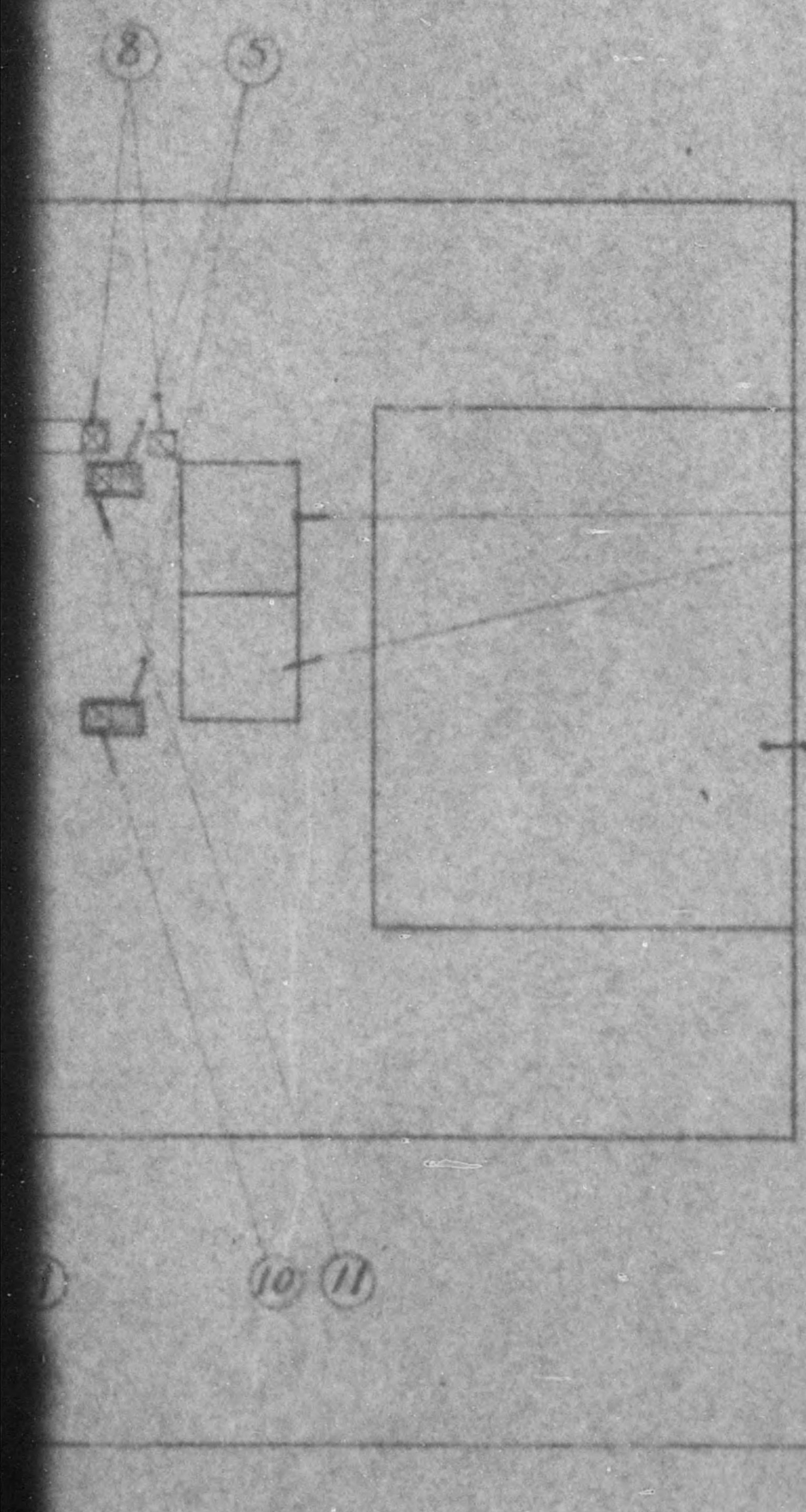

1. 2 Exhauster
3. Reaction chamber
4 Stirrer
5. Pump
6. Fan
7.~11 Motor

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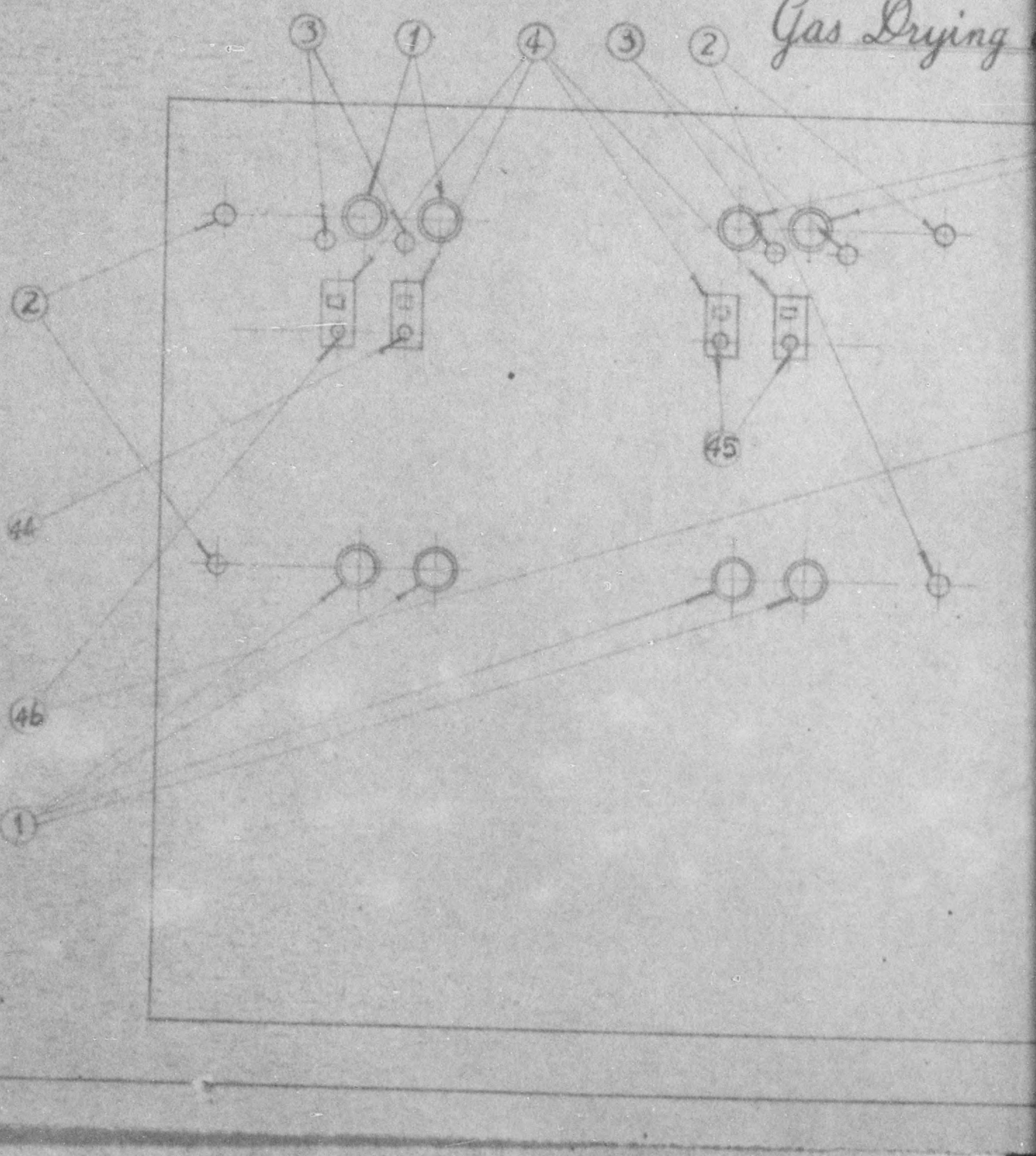

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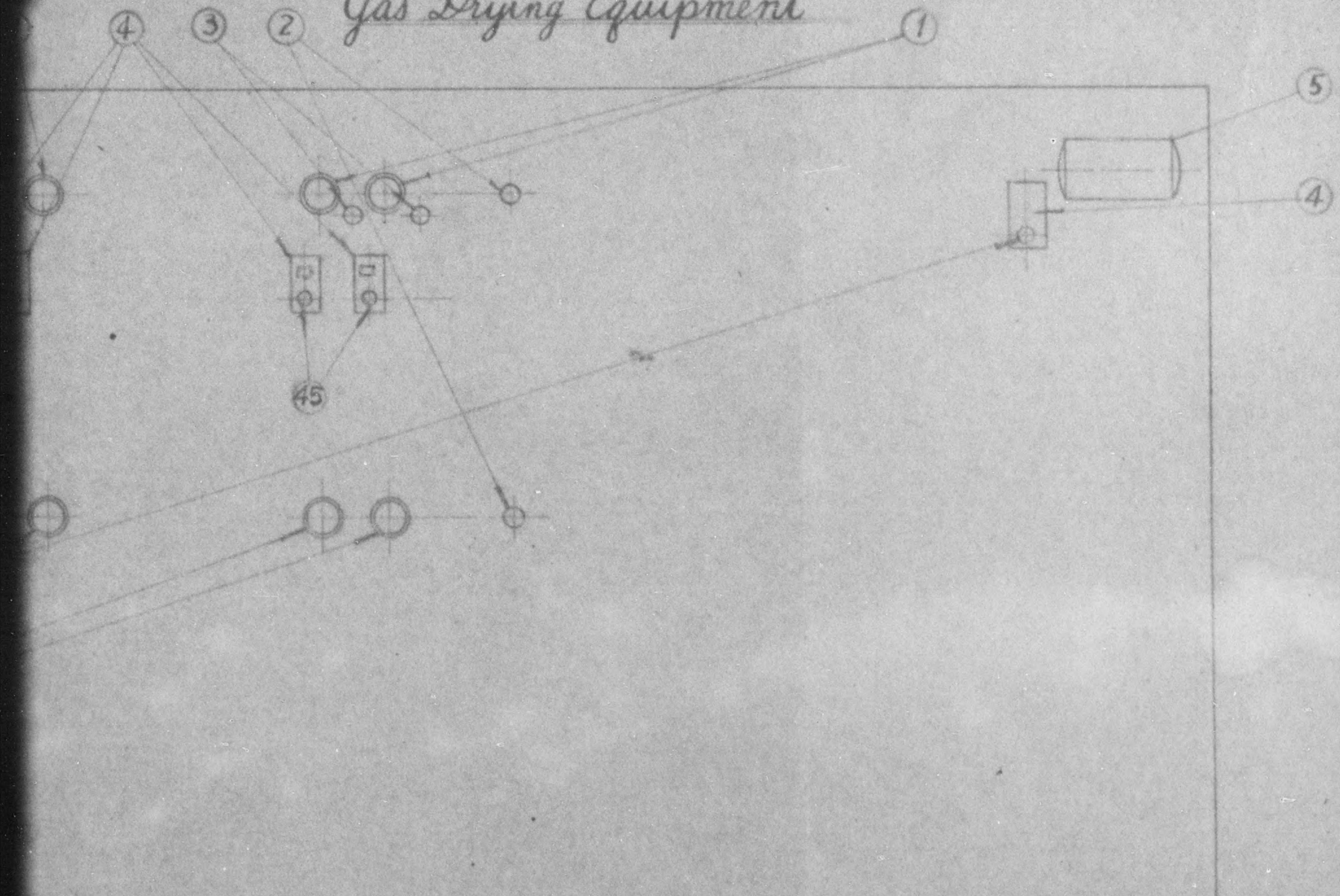
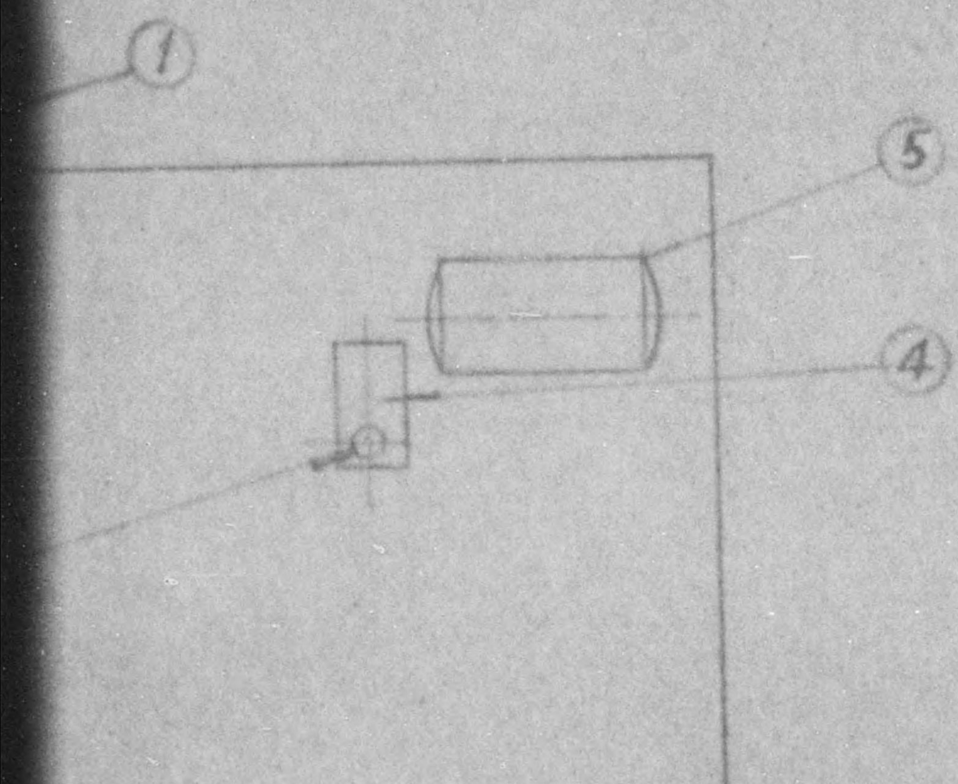
Gas Drying Equipment



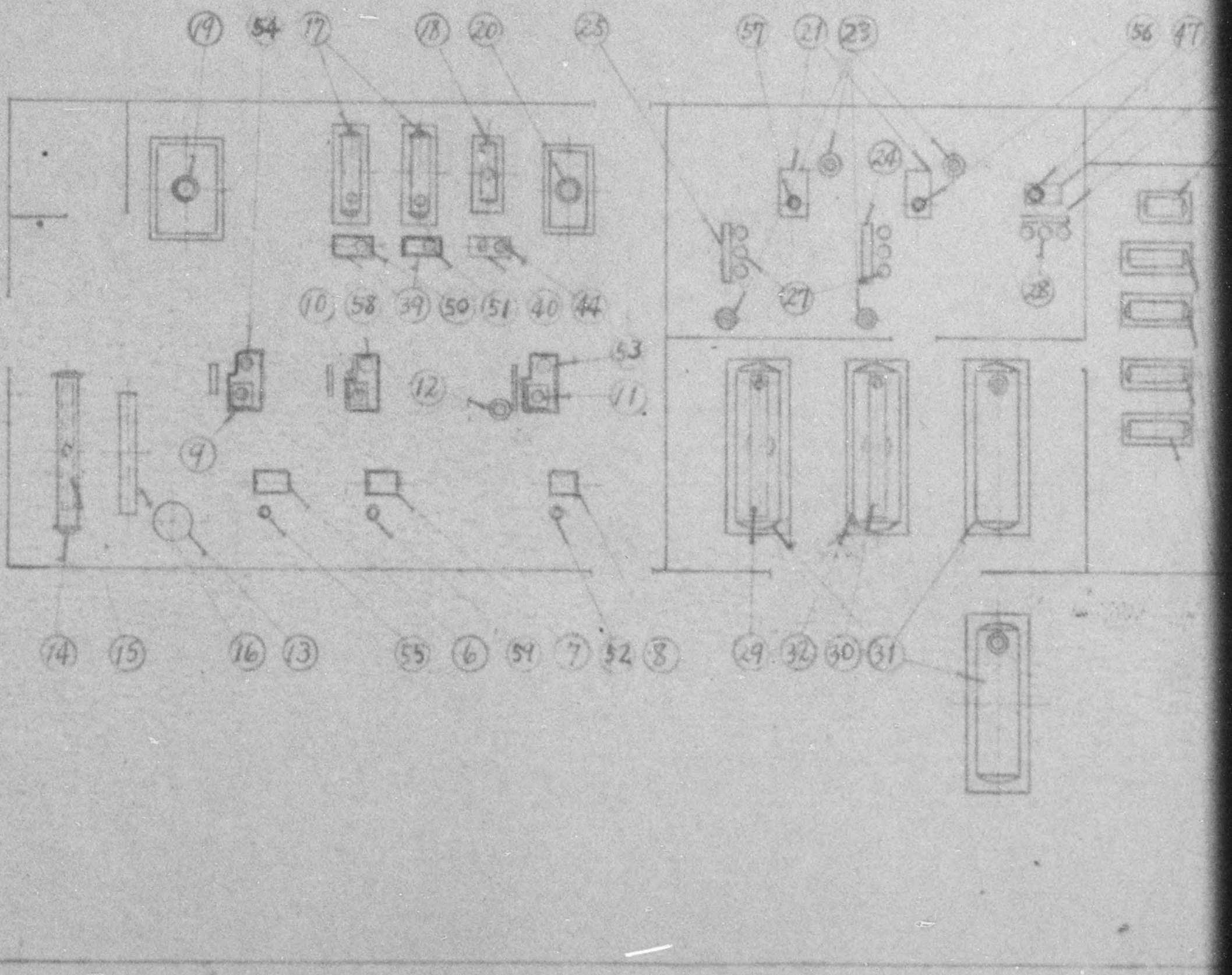
DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013



1. Drying tower
2 Acid separator
3 Acid circulating tank
4 Pump
5 Acid storage tank
~~4.4.5.4.6~~. Motor

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

Compression and Liquefy Eq



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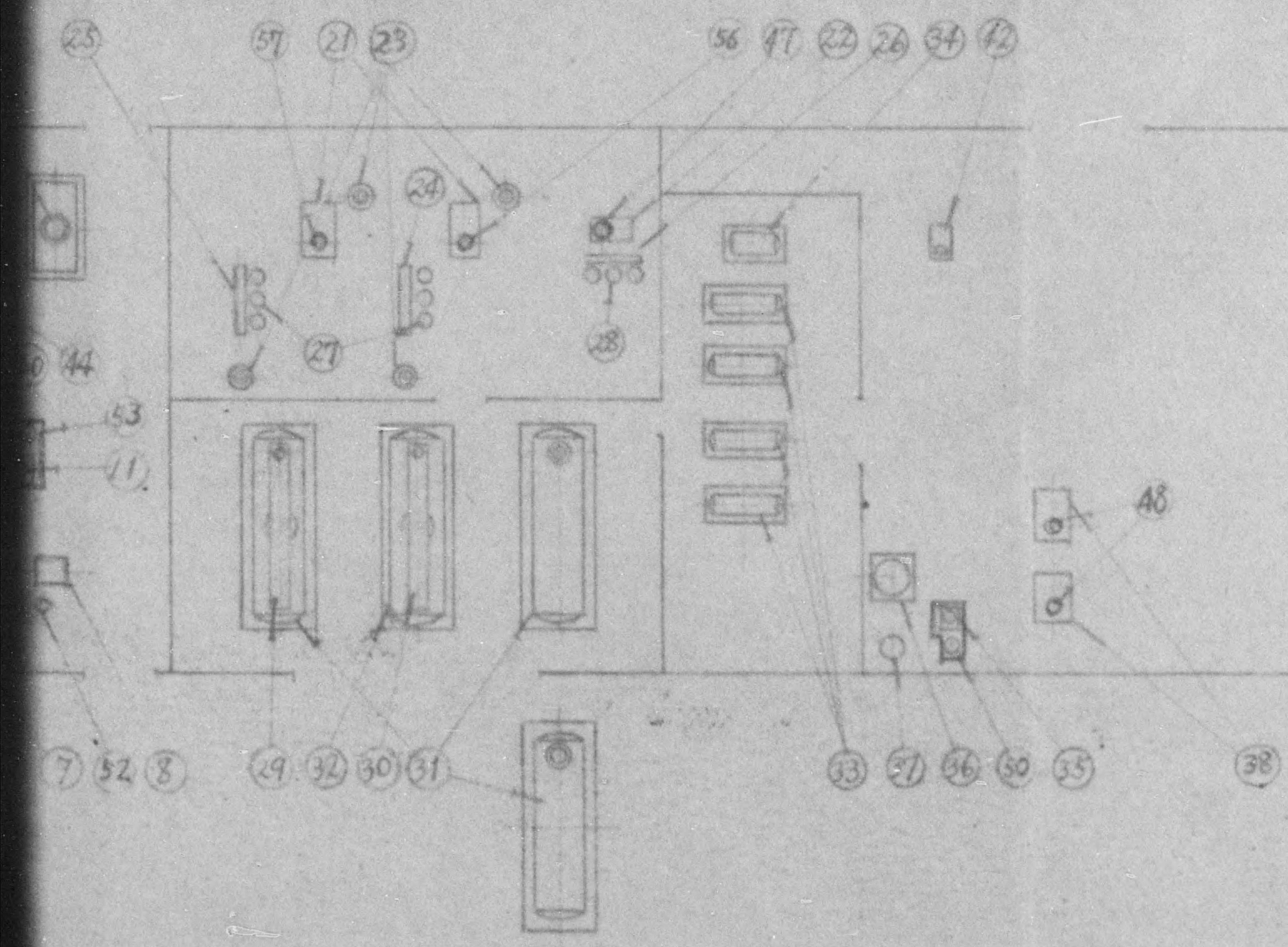
Compression and Liquefy Equipment



6. 7. 8. Ammonia
9. 10. 11 Booster
12. Ammoni
13. 14. Ammonia
15. 16. Ammonia
17. 18. Brine co
19. 20. Brine
21. 22. Vacuum
23. Gas pre
24. 25. 26. Acid cool
27. 28. Acid sepa
29. 30. Gas liqu
31. 32. Storage
33 34. Discharge
35. Air com
36. Air rec
37. Air dry
38. Blower
39. 40. Pump
42. Balance
44. 47. ~ 59

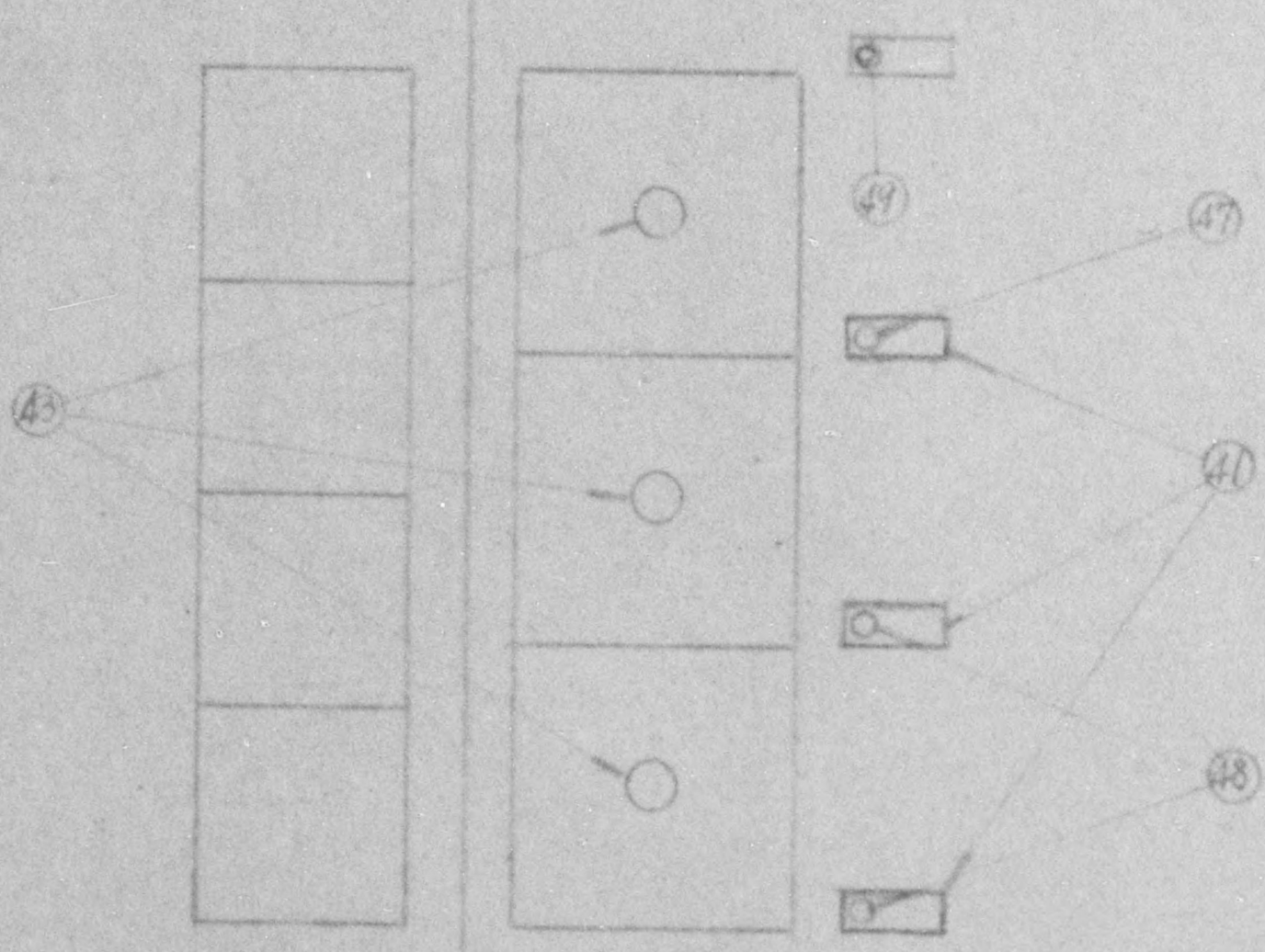
DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

6.7.8. Ammonia compressor
9.10.11 Booster
12. Ammonia cooler
13.14. Ammonia condenser
15.16. Ammonia receiver
17.18. Brine cooler
19.20. Brine tank
21.22. Vacuum compressor
23. Gas pre-cooler
24.25.26. Acid cooler
27.28. Acid separator
29.30. Gas liquefier
31.32. Storage tank
33.34. Discharge tank
35. Air compressor
36. Air receiver
37. Air drying tank
38. Blower
39.40. Pump
42. Balance
44. 47.~59 Motor

48
38

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

Exhaust Gas Eq



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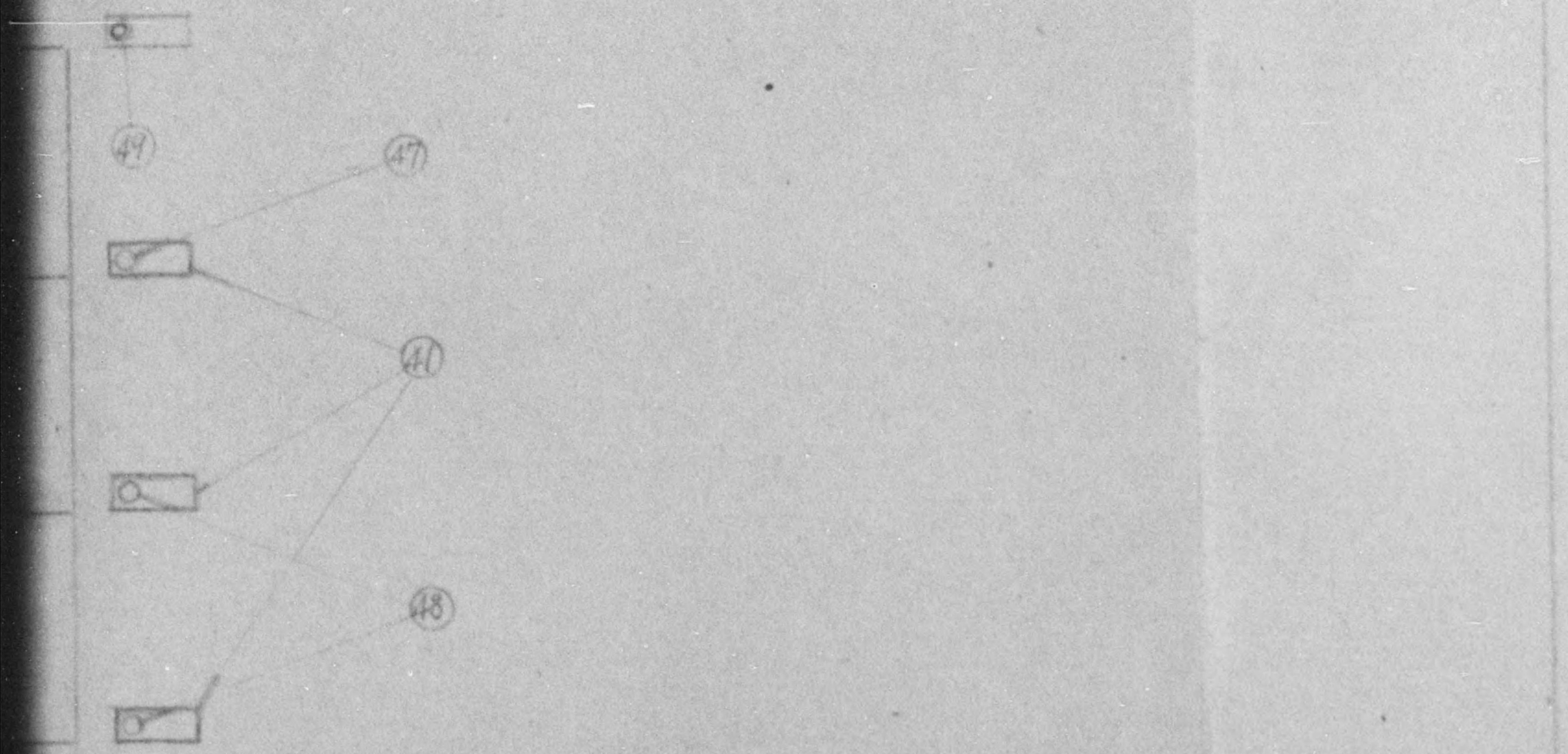
Exhaust Gas Equipment



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41. Pump
43. Stirrer
47. 48. 49. Motor

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No.	Name of Machinery	Number	Date of Permission	Removed to
10	2" ϕ Pump (with motor)	2	Apr. 22, 1947	Sulphuric acid plant
11	1 ½" ϕ pump (")	1	"	"
12	Transformer	1		"
13	Electric preheater	1		"
14	Measuring tank	1		"
15	Gas grying tower	1		"
16	Acid cooling tank	1		"
17	Acid cooler	1		"
18	Acid circulating tank	1		"
19	Turbin pump	1		"
20	Motor	1		"

Note: Machineries, No.12 - No.20, were equipped as the result of t
acid plant, and about this matte r we reported to the Toyama
on the "REPORT ON THE RENOVATION OF THE SULPHURIC ACID PLA

I certify that this report is true and correct.

Signed

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

Date of Permission	Removed to	Removed from	Reasons
Apr. 22, 1947	Sulphuric acid plant	Warehouse	As the substitute of the damaged pump.
"	"	"	"
	"	Electric plant	As the result of the renovation of sulphuric acid plant.
	"	Newly made	"
	"	"	"
	"	"	"
	"	"	"
	"	"	"
	"	"	"
	"	"	"
	"	"	"
	"	"	"

- No.20, were equipped as the result of the renovation of sulphuric
bout this matte r we reported to the Toyama Military Government Team
THE RENOVATION OF THE SULPHURIC ACID PLANT".

y that this report is true and correct.

Signed Tadayoshi Toda
TADAYOSHI TODA
Superintendent

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

TO : Toyama Military Government Team

FROM : Takaoka Plant, Nippon Soda Co., Ltd.

SUBJECT: Report of Machine-ries which were removed to Repar after Designation for Reparation.

No.	Name of Machinery	Number	Date of Permission	Removed to
1	Tranformer	1	Dec. 13, 1947	Electric room of caustic soda plant
2	Winch	1	Sept. 2, 1947	Salt solution roo of caustic soda pl
3	Electric heater	1	"	"
4.	Porcelain fan (with motor)	1	"	Electrolysis room caustic soda plant
5	Turbin pump (")	2	"	"
6	Water resister	1	"	Outside of electri room of caustic s plant
7	Centrifugal pump (")	1	"	Evaporating room caustic soda plan
8	Brake crusher (")	1	Apr. 22, 1947	Sulphuric acid pl
9	Skip hoist	1	"	"

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775 013

May 20, 1948

Military Government Team

Plant, Nippon Soda Co., Ltd.

of Machine-ries which were removed to Reparation Plant
esignation for Reparation.

er	Date of Permission	Removed to	Removed from	Reasons
	Dec. 13, 1947	Electric room of caustic soda plant	Electric plant	As a source of electric heater for subsidizing pipes by heat.
	Sept. 2, 1947	Salt solution room of caustic soda plant	Paste plant	To draw small truckes
	"	"	Newly made	For dissolving soda ash by electric heat.
	"	Electrolysis room of caustic soda plant	Warehouse	For sending chlorine gas effectively.
	"	"	"	For sending remained salt solution econo-mically.
	"	Outside of electric room of caustic soda plant	Saccharine plant	To decrease the fixed voltage of converter.
	"	Evaporating room of caustic soda plant	Warehouse	For pumping water from pitt.
	Apr. 22, 1947	Sulphuric acid plant	Electrode plant	As the substitute of the damaged rpll crusher.
	"	"	"	As the substitute of the damaged elevator.