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

Description of contents

(1) Box no. 3012

(2) Folder title/number: (22) (end)
Riken Metal Co. Ube Factory

(3) Date: Apr. 1948 - Jan. 1949

(4) Subject:

Classification	Type of record
9621	c, e, k

(5) Item description and comment:

Yamaguchi

(6) Reproduction: (Yes) No

(7) Film no. Sheet no.

(Compiled by *National Diet Library*)

DECLASSIFIED - DOD DIRECTIVE 5200.9

FILE

PFB/jk

HEADQUARTERS
YAMAGUCHI MILITARY GOVERNMENT TEAM
YAMAGUCHI, HONSHU, JAPAN
APO 317

13 January 1949

YMGT 091.33

SUBJECT: Petition for the Resumption of Magnesium Production

TO: Commanding General
I Corps
APO 301

1. Forwarded herewith petition for resumption of magnesium production submitted by the Rinkin Metal Manufacture Company Ltd. Okinoyama Nishiku Ube City, Yamaguchi Prefecture, copies of which have been submitted through Japanese channels.

2. Recommend favorable consideration.

1 Incl:
Petition

EUGENE J. McNAMARA
Lt. Col., Infantry
SMGO

DECLASSIFIED E.O. 12065 SECTION 3, 5(B)(1) NARA DATE 11/30/95

PETITION FOR THE RESUMPTION OF

MAGNESIUM PRODUCTION

The Riken Metal Mfg., Co. Ltd.
Hideo Monobe
Senior Managing Director

Okinoyama Nishiku Ube-city
Yamaguchi Pref.

DECLASSIFIED E.O. 11652 SECTION 3 (E) AND

TO: Economic & Science Section, G. H. Q., SCAP.

FROM: The Riken Metal Mfg., Co. Ltd.

SUBJECT: Petition for the resumption of magnesium production.

We had been producing magnesium from July 1935 till August 1945 in Ube factory, but since the termination of the war, we have been stopping the production hitherto.

Because almost all parts of producing equipments of magnesium plant are bitterly damaged by hydrochloric gas, when left as they are, the whole equipments would prove entirely useless in the near future. As Japan has originally very poor metal resources, we are of opinions that in the near future the demand for magnesium would increase to a considerable extent.

And we are the oldest manufacturer of magnesium with rich experience in Japan, we have very eager desire to resume the production of that material after having repaired and arranged various machineries and equipments of the plant aiming at 600 tons of output per year.

As is the general state of the company and also the plan of magnesium production mentioned as follow, we hereby petition for the permission of the resumption of magnesium production.

(1) History of the Company

The company was organized in 1933 for the purpose of producing magnesium and at that time, the production was started at a plant in Niigata Pref.

Ube plant was constructed in 1935 and operation was started from July of the year. Afterwards, in prewar time the plant was extended several times. The main product of ours was magnesium and others were such as bromine extracted directly from sea water, potassium fertilyzer, gypsum, basic magnesium carbonate and potassium chlorate.

Actual yearly production of magnesium was as follows.

Actual production of magnesium

1935	234,391 Kgs
1936	578,141 :
1937	816,051 :
1938	872,207 :

Actual production of magnesium

1939	785,177 Kgs
1940	1,156,252 :
1941	1,066,064 :
1942	653,322 :
1943	901,624 :
1944	876,322 :
1945	231,693 :

(2) Present condition of the plant

With the termination of the war, factory work was entirely stopped. But we started firstly the production of potassium fertilyzer from bitter brine in Spring 1946, and gradually developed the kinds of production and present productive capacity are shown in the following table. Besides these items, we intend to produce more chemical products utilizing facilities now lieing idle.

Name of product	Productives capacity/month
Potassium fertilizer	200 T
Bromine (from bitter brine)	4 :
Potassium chloride	8 :
Chromic oxide	3 :
Potassium bichromate	3 :
Basic magnesium carbonate	10 :
Graubers salt	30 :
Magnesia clinker	35 :

As for the production of magnesia clinker we were granted to enlarge the productive capacity to about 300 tons per month and now the construction works are proceeding. We had approximately 1,500 employees during the war time but now numbers of them dwindled to some 300 in all.

(3) Present condition of magnesium plant

All the equipments of the plant are left just as they were at the end of the war, but owing to hard operations in the war time as well as to non-repair resulting from scarcity of materials, whole equipments are now at the bad state.

Conditions are such, it is necessary to carry on repair works of almost all buildings and equipments for the reopening of magnesium refining.

DECLASSIFIED Per NARA Date 12-18-75

Main machineries and equipments are as follows.

Main machineries and equipments of magnesium plant .

(a) Dehydration works		
Dehydrating tower for bitter brine	dia, 9mx10m	
	600 tons/month	4
	400 tons/month	8
Evaporating pan	500 KW 100 tons/month	17
Electric furnace		1 set
Hcl-gas cooling tower		1 "
Hcl-gas absorbing tower		
Acid proof fan for Hcl-gas	dia 350mm	15
(b) Electrolysis works		
Electrolytic cell	5,500 A 8 V	163
Electrolyte melting bath	4 tons/day	3
Jaw-crasher	hopper size 235x315mm	2
(c) Chlorine absorbing works		
Absorbing tower	120 tons/month	15
Fan, porcelain made	dia, 250mm--200mm	8
Fan, iron made	dia, 300mm	3
Pump, for milk of lime	dia, 75mm	25
(d) Salt recovering works		
Tank, dissolving residue	$18m_3$	2
Tank, dissolving residue	$10m_3$	2
Jaw-crusher	hopper size 250x500mm	2
Vacuum evaporator	triple effect	2 set
Steam boiler (cornish type)	heating surface 40.8 sq. m	2
Filter press		7
(e) Sub-station		
Mercury arc rectifier	D. C 3,300 KW 6,000 A 550 V	2
	D. C. 3,000 KW 6,000 A 500 V	1
Rotary converter	D. C. 1,500 KW 6,000 A 250 V	2
Transformer	4,000 KVA 11,000/3,300 V	3
(f) Boiler room		
Vertical type water tube boiler	Heating surface $372m_2$ press. $9Kg/cm_2$	2

(4) Productive plan of magnesium now under contemplation

We have at present the productive capacity of about 1,200 tons of magnesium a year, but we set our output goal at 600 tons a year by operating some parts of them of which repairs seem to be comparatively easier considering the future demand for magnesium and also the present power situation. For 600 tons of magnesium production per year, 45,000 Kilo-litters of bitter brine is required and we can collect enough quantities by present contract with salt makers on the coast of Inland Sea. As for fuels, necessary qualities of coal for 600 tons are about 12,000 tons and as Ube-city and its neighbourfood produces coal, we can easily get the required quantities if we could obtain the allotment of low grade coal. As electric power required per ton of magnesium refining may be about 55,000 KWH, power recieved would be 5,000 KW., and workers required numbers 400 including those on three shift system of 8 hours.

We shall be able to manage operations only filling up wanting workers because main engineers who have rich experience in magnesium refining still remain in their posts.

For 600 tons of magnesium refining, under mention equipment are indispensable and repair expense for these equipments and buildings is estimated at about 30,000,000 Yen.

Dehydrating tower	3
Evaporating pan	4
Electric furnace	7
Electrolytic cell	50
Vacuum evaporator	2 sets
Other miscellaneous machines and pipings	
Roofs of buildings	

PETITION FOR THE RESUMPTION OF

MAGNESIUM PRODUCTION

The Riken Metal Mfg., Co. Ltd.
Hidéo Monobe
Senior Managing Director

Okinoyama Nishiku Ube-city
Yamaguchi Pref.

DECLASSIFIED E.O. 12065 SECTION 3 (E)(2) NLS No. [illegible]

TO: Economic & Science Section, G. H. Q., SCAP.

FROM: The Riken Metal Mfg., Co. Ltd.

SUBJECT: Petition for the resumption of magnesium production.

We had been producing magnesium from July 1935 till August 1945 in Ube factory, but since the termination of the war, we have been stopping the production hitherto.

Because almost all parts of producing equipments of magnesium plant are bitterly damaged by hydrochloric gas, when left as they are, the whole equipments would prove entirely useless in the near future. As Japan has originally very poor metal resources, we are of opinions that in the near future the demand for magnesium would increase to a sonsiderable extent.

And we are the oldest manufacturer of magnesium with rich experience in Japan, we have very eager desire to resume the production of that material after having repaired and arranged various machineries and equipments of the plant aiming at 600 tons of output per year.

As is the general state of the company and also the plan of magnesium production mentioned as follow, we hereby petition for the permission of the resumption of magnesium production.

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DECLASSIFIED E.O. 11652 SECTION 3 (E), MAR 8, 1978

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Main machineries and equipments of magnesium plant

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Hcl-gas cooling tower		15
Hcl-gas absorbing tower	dia 350mm	
Acid proof fan for Hcl-gas		
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Jaw-crasher	hopper size 235x315mm	2
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Mercury arc rectifier	D. C 3,300 KW 6,000 A 550 V	2
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Roofs of buildings	

DECLASSIFIED E.O. 12065 SECTION 3 (E)(1) MAR 05

PETITION FOR THE RESUMPTION OF MAGNESIUM PRODUCTION

The Riken Metal Mfg., Co. Ltd.
Hideo Monobe
Senior Managing Director

Okinoyama Nishiku Ube-city
Yamaguchi Pref.

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DECLASSIFIED - EO 12065 SECTION 3 NND/NARS

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DECLASSIFIED E.O. 12065 SECTION 3 (E), NARS DATE

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Electric furnace	7
Electrolytic cell	50
Vacuum evaporator	2 sets

Other miscellaneous machines and pipings
Roofs of buildings

To: R C & D Section

Subject: The attached papers were send to G.H.Q. Anti-trust Section through the Financial Ministry

From: Riken Metal Mfg. Co. Ltd.
Ube City

Counter copy [illegible] R.C. & D.

1 copy file: - 2 copies

Requested by personal in R C & D when visiting this factory. ——— Receptionist

DECLASSIFIED - NOT RESTRICTED

1. ADJ
2. SMGD
3. RCL
4. LBR
5. LEG
6. ED
7. WELF
8. PH
9. INF
10. D.CO
11. FILE

JUN 25 RECD

APPRICATION FOR APPROVAL OF INSTALLATION OF BUSINESS FACILITIES

Senior Managing Director. R. Moyoke

The Riken Metal Mfg. Co. Ltd.

Date, April 1948.

To: Finance Minister Tokutaro, Kitamura.

From: Riken Kinzoku Kabushiki Kaisha.
(The Riken Metal Mfg. Co. Ltd.)

Subject: Application for approval of Installation (expansion and improvement) of Business Facilities.

Applicant:

1. Trade Name. The Riken Metal Mfg. Co. Ltd.
2. Address. Umetatechi Okikaimen Ogushi Oaza Ube-city Yamaguchi Pref.
3. Name of Representative.
Chief Managing Director. Hideo, Monobe.
4. Authorixed Capital.
¥14,300,000
5. Paid-up Capital.
¥14,300,000
6. Type and contents of Business.

(1) Manufacture and Sales of Metalic Magnesium and other metals.
(2) Manufacture and Sales of various kind of light alloys and copper alloys.
(3) Manufacture and Sales of potassium chlorate and other chemical products.
(4) Manufacture and Sales of various kind of goods produced from bitter brine as the raw materials.
(5) All other business pertaining to the above item.

Application for approval of the above subject matter is submitted as follows:

1. Detailed plan for Installatimn, Expansion and Improvement of Business Facilities.

Name of plan: Production plan of Magnesia clinker, by expansion and improvement of the production equipments of Magnesium Hydrovide, which now we posses.

Location: In Ube Factory of The Riken Metal Mfg. Co. Ltd. at Ube-city Yamaguchi Pref.

Detailed plan:

(1) Buildings and other structures.

Name of Bld.	Type	No. of Bld.	Area M_a	Remarks
Lime Kiln Works	Iron frame 3 storied Wooden frame 1 storied Roofed with slate	1	842.6	Repair (Home Work)
Lime Slaking Works	Wooden frame 2 storied Roofed with slate	1	198.0	: : :
Stiring Tank Works	Wooden frame 1 storied Roofed with asphalt roofing	1	198.0	: : :
Shed for Reaction Tank and Lime milk, and pump Room	: : : :	1	264.0	: : :
Filter Press Room	Wooden frame 1 storied Roofed with slate	1	198.0	: : :
$Mg(OH)_2$ Drying Yard	Wooden frame hut Roofed with cryptomeria-bark	5	940.5	Expansion : Repair : :
Lime Kiln	1 set			Expansion :
Magnesia Kiln	2 set			Repair : :
Attached Structure	Rail line and others			

(2) Machines, Tools and Apparatuses.

Name	Type	Number	Remarks
3 Phase Induction Motor	7.5Hp	15	Repair (Home Work)
3 : : :	5 :	11	: : :
3 : : :	3 :	19	: : :
Elevator	Head 10m, Capacity 2 Tons	1	: : :
Skip Hoist	: 4m, : 0.5 :	2	: : :
Motor Winch	Capacity 1 Ton	3	: : :
Roll Crusher	Dia 600m/m wide 300m/m	1	: : :
Sund Pump	: 75m/m	8	: : :
Centrifugal Pump	: 100m/m	4	: : :
Turbin Pump	: 75m/m	2	: : :
Filter Press	900m/m Sq. 40	6	: : :
Sieving machine	Length 900m/m Wide 600m/m	2	Expansion :
Shaft Kiln	Dia 1.5m Height 5m	10	: : :

Name of Bld.	Type	No. of Bld.	Area M²	Remarks
Lime Kiln Works	Iron frame 3 storied Wooden frame 1 storied Roofed with slate	1	842.6	Repair (Home Work)
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Lime Kiln	1 set			Repair : :
Magnesia Kiln	2 set			Expansion :
Attached Structure	Rail line and others			Repair : :

(2) Machines, Tools and Apparatuses.

Name	Type	Number	Remarks
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3 : : :	5 :	11	: : :
3 : : :	3 :	19	: : :
Elevator	Head 10m, Capacity 2 Tons	1	: : :
Skip Hoist	: 4m, : 0.5 :	2	: : :
Motor Winch	Capacity 1 Ton	3	: : :
Roll Crusher	Dia 600m/m wide 300m/m	1	: : :
Sund Pump	: 75m/m	8	: : :
Centrifugal Pump	: 100m/m	4	: : :
Turbin Pump	: 75m/m	2	: : :
Filter Press	900m/m Sq. 40	6	: : :
Sieving machine	Length 900m/m Wide 600m/m	2	Expansion :
Shaft Kiln	Dia 1.5m Height 5m	10	: : :
Lime slaking Tank	: 1.6m×1.8m	3	Repair : :
Reservior (under ground)	L 3m×W 2.5m×H 1.5m	2	: : :
Lime milk Reservior	Dia 4m×4.5m	4	: : :
Reaction Tank	: 2.5m×2.7m	15	: : :
Settling Tank	L 6m×W 4m×H 1.5m	18	: : :
$Mg(OH)_2$ Reservior	Dia 4m×4.5m	5	: : :
Dump Car	Gauge 2.4 Inches 0.4M³	14	: : :
	: 30 :	300	: : :
Plate for Drying	L 1.2m×W 0.8m	1,000	: : :

DECLASSIFIED E.O. 12065 SEC 3.5, NLJ

DECLASSIFIED E.O. 12065 SECTION 3 (E)/NNSS NO.

Name	Type	Number	Remarks
Turn Table	Gauge 24 inches	10	Repair (Home Work)
Rail Line			: : :
Bulb	3 and 4 inches	111pcs.	Purchase
Settling Works for above machines			

2. Summary of Budget.

Cost of Repair and Expansion for Buildings and other structures. ¥2,057,909

Cost of Repair and Expansion for Machines, Tools and Apparatuses. ¥1,038,700

Total ¥3,096,609

3. Time of Execution.

Time of works start. Within a week after permission.
Time of works complete. Within 4 months after permission.
Time of operation start. We shall start the operation utilizing a part of equipment as soon as possible, after the permission, and produce Magnesium Hydroxide, and the production of Magnesia clinker shall be started after the completion of the construction of the Kiln for Magnesia clinker.
We expected, the Time of operation of all equipment shall be on Sep. 1st. 1948.

4. Method of acquiring necessary Funds and Materials.

(a) Method of acquiring necessary Funds.

(1)Self Fund. ¥ 46,609
(2)Loan (Financial Corporation for Reorganization and Reconstruction) ¥3,050,000

Total ¥3,096,609

(b) Method of acquiring necessary materials.

We are planning to appropriate strenuously the materials on hand for execution of the works.

DECLASSIFIED E.O. 12065 SECTION 3 (E), MAR 31, 1978

Necessary materials mentioned as follows.

Name of materials	Total quantity	Materials on hand	Materials to be purchase
Timber	577 Koku	200 Koku	377 Koku
Cement	12,100 Kg	0	12,100 Kg
Slate (cement)	250 pcs	0	250 pcs
Magnesia slate	350 Tubo	350 Tubo	0
Glass	1,300 M_2	0	1,300 M_2
Fire Proof Brick	8,850 pcs	2,850 pcs	6,000 pcs
Common Brick (red)	26,500 :	3,500 :	23,000 :
Carbide	5,500 Kg	0	5,500 Kg
Steel	67,700 :	20,700 Kg	47,000 :
Steel (secondary products)	4,935 :	270 :	4,665 :

5. Reasons necessitating such Installation, Expansion and Improvement:

We had been producing metalic magnesium since 1935 to the end of the war at our Ube-plant. In process of magnesium production we adopted the electrolysis method of dehydrous magnesium chloride which was produced by dehydration of bitter brine.
But we started another method since 1940 for the purpose of cutting down the quantity of bitter brine of which supply was limited to some amount because of several natural phenomena and also aiming to lighten the difficulties caused in the process of dehydrating operation.

The new method was like that---
Magnesium hydrooxide thrown in to the electrolysis tank reacts with chlorine gas which generates from electrolysis of magnesium chloride that is inrested aside, and by reaction of them there is produced magnesium chloride successively of which electrolysis finally produces magnesium.
Toward the war-end, our process mostly depended on this new method.
Magnesium hydrooxide is produced through the process of reaction, precipitation, filtering, lastly drying of mixed solution of sea water or magnesium chloride solution with milk of lime.
As we have in our plant the equipments of magnesium hydrooxide production covering the capacity of 600 tons per month, we made up our plan to produce magnesia clinker 360 tons per month utilizing these equipments by calcination of magnesium hydrooxide.
We have also lime kiln apparatus of which capacity is 50 tons daily in order to supply quick lime as raw materials.
All these equipments, owing to the shortage of repair materials and hard operation in the war-time, were considerably worse state at the war-end, and as we have been stopping operations in these works without any repair, it is necessary to mendand repair almost all parts of these equipments.

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Nowaday the demand for magnesia clinker became high in the iron industry and others, but the possibility of import of magnesite is of very little hope at present and besides home production is very scarce.

From these points of view, we have decided our plan to manufacture magnesia clinker to provide with the increasing demand after the rapid completion of repair and improvement works of our present equipments.

This plan virtually aims at repair works of equipments now at rest and we have only to build newly the drying works of magnesium hydrooxide in building, and also magnesia clinker kiln as well as oscillating screen in machinery.

6. In case where borrowing of Funds or withdrawal of Deposits is contemplated.

(a) Amount, Time and Method of such borrowing or withdrawal.

Amount of Borrowing of Funds		¥3,050,000
Time	:	June 1st 1948
Method	:	by discounting of Bill

(b) Party to be the source of such borrowing.
Financial Corporation for Reorganization and Reconstruction.
(Hiroshima Branch Office)

(c) Reason necessitating such action.
At present we have only necessary funds for ordinary operation of the business, therefore as we need large sum of funds for executing the expansion and improvement of the equipments in this time, we have to borrow the necessary funds from the Financial Organs.

7. Other relevant facts.

Magnesia clinker that we are now planning to produce, as mentioned in this application, are chiefly useful for the basement of the furnace in the steel foundry.
We send the samples of magnesia clinker, that we produced, to the Yawata Steel Foundry of the Nihon Iron Mfg. Co. Ltd. and the Fuso Metal Ind. Co. Ltd. and we found that our magnesia clinker were suitable for their purpose after their experiment.

Attached Documents.
(1) Articles of Incorporation, latest Balance Sheet and Profit and Loss Statement.

(2) Detailed Business plan and account for estimated Income and expenditures following exenation of such Installation, Expansion and Improvement of Business Facilities.

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(3) Document of appraisal, in case of purchases of Business Facilities.

(None)

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BALANCE SHEET
as of March 31st 1946

The Riken Metal Mfg. Co. Ltd.

Assets

Item		Amount
	Current Assets	
(1)	Cash and Deposit	1,981,331.41
(2)	Deposit of reserve for Taxes	100,000.00
(3)	Advance for trade payment	625,239.49
(4)	Account Receivable	5,239,363.61
(5)	Inventory Assets	
	(a) Materials and Factory supplies	2,812,427.70
	(b) Partly finished products and goods in process	624,149.93
	(c) Finished goods	161,258.65
	Total Current Assets	11,593,869.79
	Investment	
(6)	Shares of Company	1,017,110.00
(7)	Shares of Trade association	43,000.00
(8)	Long Term Investment (National Bond)	60,467.00
	Total Investment	1,120,577.00
	Fixed Assets	
(9)	Equipments of Ube-factory	12,038,697.07
(10)	Equipments of Tokyo-factory	1,438,263.21
(11)	Equipments of Setoda Branch factory	537,895.96
(12)	Construction in process	8,404,784.13
	Total Fexed Assets	22,419,645.31
	Deferred charges and Prepaid Expenses	
(13)	Prepaid Expenses	52,743.86
	Total Prepaid Expenses	52,743.86
	Intangible Assets	
(14)	Goodwill and Patent Right	270,510.00
	Total Intangible Assets	270,510.00
	Other Assets	
(15)	Guaranty Money	101,115.00
	Total Other Assets	101,115.00
	Loss	
(16)	Loss brought forward	920,880.65
(17)	Loss for current term	1,510,673.15
	Total Loss	2,431,553.80
	Total Assets	37,996,014.76

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Liabilities and Net Worth

Item		Amount
	Current Liabilities	
(1)	Account payable	397,684.67
(2)	Account Liabilities	509,368.84
(3)	Other current Liabilities	
	(a) Advances from Trade customers	41,800.00
	(b) Other Advances	561,413.59
	Total Current Liabilities	1,510,266.10
	Long Term Liabilities	
(4)	Long Term Loans and Note payable	21,261,769.12
	Total Long Term Liabilities	21,261,769.12
	Reserve	
(5)	Reserve for Taxes	115,884.54
	Total Reserve	115,884.54
	Net Wroth	
(6)	Capital stock authorized	14,800,000.00
(7)	Legal Reserves	237,095.00
(8)	Special Reserves	65,000.00
	Total Net Worth	15,102,095.00
	Total Liabilities and Net Worth	37,990,014.76

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STATEMENT OF PROFIT AND LOSS

(from Oct. 1 1945)
(to Mar. 31 1946)

Profit		Loss	
Sales	500,830.15	Cost of good sold	266,801.78
Interest Received	8,643.04	Loss of ship Dept	4,238.42
Dividend Received	460.45	Interest Expenses	541,774.02
Other Income	515,800.33	War Damages	41,236.37
Net Losses for Term	1,510,673.15	Evacuation Expenses	515.00
		Idle cost	1,334,542.08
		General and Administrative Expenses	54,444.43
		Retirment Expenses	138,400.00
		Other Expenses	154,403.01
Total	2,536,407.11	Total	2,536,407.11

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(New account)

BALANCE SHEET
as of Jan. 31 1948

The Riken Metal Mfg. Co. Ltd.

Assets	
Equipments of Ube plant	¥ 4,028,867.60
Equipments of Branch plant	473,733.97
Equipments of Tokyo Branch office	10,430.28
Construction in process	1,181,192.30
Raw materials and Manufacturing supplies	3,001,475.71
Partly-finished products	653,892.89
Finished goods	1,865,166.10
Godds in process	536,693.27
Debentures	19,360.00
Guarantee Money	98,490.00
Account Receivable-Trade	1,140,740.33
Account Receivable-others	191,359.77
Prepaid Expenses	22,536.84
First Restricted Deposits	17,161.05
Free Deposits	110,417.36
Transfer Deposits	4,539.53
Cash on hand	541,463.04
Tokyo Factory Accounts	1,449,414.55
Setoda Branch Works Accounts	2,260,786.64
Cost of Materials	663,827.83
Cost of Labor	264,552.79
Manufacturing Expenses	353,102.17
Selling Expenses	134,739.00
General and Administrative Expenses	395,645.75
Cost of goods sold	10,633,881.60
Interest Expenses	104,257.80
Taxes and others	2,580.80
Rent (land)	570,148.20
Idle cost	178,945.42
Tax for non-war damage	10,782.00
Other miscellaneous Expenses	4,270.05
Total	¥31,638,275.28

Liabilities	
Long Term Loans from Bank	¥ 1,760,000.00
Account payable-Trade	1,373,944.67
Advances from Trade Customers	206,397.00
Employees Deposits	85,593.97
Other Liabilities	447,182.84
Other Deferred Income	528,483.50
Reserves for Depreciation	72,756.72
Due to Old Account	10,276,065.53
Amount of Sales	14,587,085.62
Interest Received	9,032.63
General and Administrative Expenses (suspense)	356,487.25
Expenses of Ships Dept.	145,842.83
Other miscellaneous Income	1,789,402.72
Total	¥31,638,275.28

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(Old account)

BALANCE SHEET
as of Jan. 31 1948

Assets	
Equipments of Ube-plant	¥ 6,649,961.75
Equipments of Branch plant	114,913.00
Equipments of Tokyo-plant	1,360,264.68
Equipments of Hirao Branch plant	34,222.89
Construction in process	4,974,168.45
Patent Right	229,510.00
Good will	41,000.00
Partner ship Investment	56,000.00
Raw materials and Factory supplies	992,355.28
Partly Finished Products	30,000.00
Capital participation	986,750.00
Guarantee Money	25.00
Advances for Trade payment	814,867.81
Account Receivable-Trade	140,119.64
Account Receivable-others	196,164.55
Prepaid Expenses	3,816.56
Second Restricted Deposits	34.65
Due to New Account	10,278,065.53
War Indemnity Tax	7,184,561.02
Offices Allowances	1,500.00
Cost of goods sold	2,370.58
Interest Expenses	800.43
Taxes	125,954.34
Idle cost	166,633.31
Administrative Expenses for Reparation plant	39,512.22
Tax for non-war damage	597.00
Other miscellaneous Expenses	249,071.77
Loss brought forward	3,124,949.63
Total	¥37,796,190.09
Liabilities and Net Worth	
Capital (paid up)	¥14,800,000.00
Legal Reserves	237,095.00
Special Reserves	65,000.00
Long Term Loans from Bank	20,592,684.01
Account payable-trade	372,481.52
Advances from Trade Customers	23,277.21
Other Account ∮ payable	564,200.70
Deferred Income	16,217.92
Reserves for Taxes	15,884.54
Setoda Branch Works Account	50,733.07
Amount of Sales	23,319.00
Interest Received	1,918.17
Dividends Received	32,821.00
Rental Income	570,148.20
Other miscellaneous Income	430,409.75
Total	¥37,796,190.09

Detailed plan for Installation,
Expansion and Improvement
of Business Facilities

Name of plan:
Repair works of producing equipment of magnesium hydrooxide and production of magnesia clinker with some expansion.

Location:
The compound of Ube-plant,
The Riken Metal Mfg. Co. Ltd.
Umetatechi Okikaimen Oaza Ogushi Ube-city Yamaguchi Pref.

I. Land

(1) Land renting

Use	Location	Kind	Area	Owner	Rent-fare
Factory land	Umetatechi Okikaimen Oaza Ogushi Ube-city Yamaguchi Pref.	Reclamation	47,239 Tubo	Ube-Kosan Co.	2 Yen per year

No necessity to rent land newly because the compound of expansion is within this area.

(2) Buildings and other structures

Name of Bld.	Type	No. of Bld.	Area	Cost of Repair and Expansion	Remarks
			M_2		
Lime Kiln Works	Iron frame 3 storied Wooden frame 1 storied Roofed with slate	1	842.6	¥ 292,029	Repair (Home Work)
Lime Slaking Works	Wooden frame 2 storied Roofed with slate	1	198.0	83,321	: : :
Stiring Tank Works	Wooden frame 1 storied Roofed with asphalt roofing	1	198.0	54,421	: : :
Shed for Reaction Tank and Lime milk, and pump Room	Roofed with asphalt roofing	1	264.0	73,410	: : :
Filter Press Room	Wooden frame 1 storied Roofed with slate	1	198.0	66,253	: : :
$Mg(OH)_2$ Drying Yard	Wooden frame hut Roofed with cryptomeria-bark	5	940.5	257,375	Expansion

Repair works of producing equipment of magnesium hydroxide and production of magnesia clinker with some expansion.

Location:
The compound of Ube-plant,
The Riken Metal Mfg. Co. Ltd.
Umetatechi Okikaimen Oaza Ogushi Ube-city Yamaguchi Pref.

I. Land

(1) Land renting

Use	Location	Kind	Area	Owner	Rent-fare
Factory land	Umetatechi Okikaimen Oaza Ogushi Ube-city Yamaguchi Pref.	Reclamation	47,239 Tubo	Ube-Kosan Co.	2 Yen per year

No necessity to rent land newly because the compound of expansion is within this area.

(2) Buildings and other structures

Name of Bld.	Type	No. of Bld.	Area	Cost of Repair and Expansion	Remarks
Lime Kiln Works	Iron frame 3 storied Wooden frame 1 storied Roofed with slate	1	842.6 ㎡	¥ 292,029	Repair (Home Work)
Lime Slaking Works	Wooden frame 2 storied Roofed with slate	1	198.0	83,321	: : :
Stiring Tank Works	Wooden frame 1 storied Roofed with asphalt roofing	1	198.0	54,421	: : :
Shed for Reaction Tank and Lime milk, and pump Room	Roofed with asphalt roofing	1	264.0	73,410	: : :
Filter Press Room	Wooden frame 1 storied Roofed with slate	1	198.0	66,253	: : :
$Mg(OH)_2$ Drying Yard	Wooden frame hut Roofed with cryptomeria-bark	5	940.5	257,375	Expansion :
Lime Kiln	1 set			32,860	Repair : :
Magnesia Kiln	2 set			843,384	Expansion :
Attached Structure	Rail line and others			354,856	Repair : :
Total				¥2,057,909	

Details of item (2)

(a) Wages for the construction

Kind of Works	Details	No. of Blg.	Area	Wages	Remarks
Roofing repair of Lime Kiln Works	Magnesia slate roofing	1	M_2 858.0	¥ 78,000	Repair (Home Work)
Repair of building of Lime Kiln Works	All around of works		842.0	21,000	: : :
Attached above repair	All around of works			24,000	: : :
Lime Kiln repair				25,000	: : :
Roofing repair of Lime Slaking Works			198.0	21,000	: : :
Building repair				20,200	: : :
d.				2,500	: : :
Track repair					
Roofing repair of Sea water mixing Tank	All around			29,900	: : :
Shed for reaction tank and Lime milk and pump Room	Repair		792.0	30,900	: : :
Roofing repair				14,100	: : :
d.					
Building repair of Filter press Room	All around			8,500	: : :
Attached Works				30,500	: : :
d.					
Construction of $Mg(OH)_2$ drying Room	Ground works	5		137,500	
d.	Roofing, others				
Construction of magnesia Kiln				597,800	
Repair of other structures				198,500	Repair (Home Work)
Total				¥1,239,400	

(3) Materials (for Buildings and other structure)

Term	Name of material	Quantity wanted	Details		Remarks
			on hand	Allotment wanted	
First quarter of year	Timber	577 Koku	200 Koku	377 Koku	
Ditto	Cement	12,100 Kg		12,100 Kg	
:	Iron bar	500 :	500 Kg		
:	Angle bar	18,870 :		18,870 :	
:	Iron plate	114,000 :		144,000 :	
:	Zinc gilded sheet	4,200 :		4,200 :	
:	Nail	12,230 :	4,400 Kg	7,830 :	
:	Attachment to rail line	3,870 :		3,870 :	
:	Slate	250 pcs	250 pcs		
:	Magnesia slate	825 M_2	825 M_2		Home made
:	Glass plate	1,300 :	1,300 :		
:	Fire brick	60,000 pcs		60,000 pcs	
:	Brick	26,500 :	3,500 pcs	23,000 :	
:	Fire clay	100 bale	100 bale		
:	Carbide	1,000 Kg		1,000 Kg	

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Detailed list for (3) Materials
(for Buildings and Other Structure)

Name of material	Kind	Standard & Size	Unit	Quantity	Unit price
Timber	general use	Pine 6.0-7.5×12-15	Koku	611	¥ 144
	: :	Cryptomeria 6.0-7.5×12-15	:	149	165
	(Note Total quantity of worked-up timber 460 Koku)				
	(Total price				230,000 Yen)
	Tie	No. 4 grade	Piece	1,250	57
Cement		Portland	Ton	12	1,714
Common steel	Round bar	Round 13	:	0.1	6,890
	: :	Round 16	:	0.2	6,290
	: :	Flat 3×50	:	0.2	6,390
	Angle bar	9×75×75	:	6	6,290
	: :	6×65×65	:	3	6,290
	Iron plate	6×6×10	:	15	7,610
	Zinc gilded sheet	No. 29 3 6	:	45	78
	Nail	$1_1/_2$	Barrel (60 KG)	1	1,150
	:	2	:	2	930
	:	$2_1/_2$	:	2	920
	:	3	:	2	870
	:	4	:	1	815
Attachment to rail line	Joint plate	9 Kg	Ton	3	9,460
	Nail	Length 90mm	Piece	10,000	2.2
	Balt nat	Length 42mm	:	3,000	6
Asbest slate		725 1,820mm	Sheet	250	187
Magnesia slate		16 square	Tubo	350	263
Glass plate	Transparent		150 Feet case	10	1,842
Fire Brick	Clayey	No.2	Ton	20	2,060
	:	Special type	piece	950	50
Brick	Red	1st grade	:	26,500	3.5
Fire clay	Clayey	No. 2	Ton	6	1,447
Carbide		No. 4	Can (22.5 Kg)	45	190

Note: All total amount containing transportation fare and cost of working up of timber ¥997,719

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(3) Materials
ber Structure)

	Unit	Quantity	Unit price	Total amount	Date of Notification of Japanese Gov. Price Board
2-15 la	Koku	611	¥ 144	¥ 87,984	as of 1947 3 31
2-15	:	149	165	24,585	:
worked-up timber 460 Koku)					
		230,000 Yen)			
do	Piece	1,250	57	71,250	:
	Ton	12	1,714	20,568	: 8 1
	:	0.1	6,890	689	: 7 12
	:	0.2	6,290	1,258	:
	:	0.2	6,390	1,678	:
	:	6	6,290	37,740	:
	:	3	6,290	18,870	:
	:	15	7,610	114,150	:
6	:	45	78	3,510	: 8 1
	Barrel (60 KG)	1	1,150	1,150	:
	:	2	930	1,860	:
	:	2	920	1,840	:
	:	2	870	1,740	:
	:	1	815	815	:
	Ton	3	9,460	19,380	: 7 12
Omm	Piece	10,000	2.2	22,000	Estimated
2mm	:	3,000	6	18,000	:
Omm	Sheet	250	187	46,750	as of 1947 9 1
	Tube	350	263	92,000	(no official price) Home made
	150 Feet case	10	1,842	18,420	as of 1947 8 5
	Ton	20	2,060	41,200	: 9 11
ype	piece	850	50	42,500	Estimated
	:	26,500	3.5	92,750	as of 1947 10 21
	Ton	6	1,447	8,682	: 9 11
	Can (22.5 Kg)	45	190	8,550	: 8 12
				¥799,917	

containing transportation fare
ting up of timber ¥997,719

(4) Machines, Tools and Apparatuses

Name	Type	Number	Cost of Repair and Expansion	Remarks
3 Phase Induction Motor	7.5 Hp	15	¥ 15,000	Repair (Home Work)
3 : : :	5 :	11	8,800	: : :
3 : : :	3 :	19	13,300	: : :
Elevator	Head 10m Capacity 2 tons	1	20,000	: : :
Skip Hoist	Head 4m Capacity 0.5 :	2	14,000	: : :
Motor Winch	Capacity 1 tons	3	6,000	: : :
Roll Crusher	Dia 600m/m wide 300m/m	1	2,000	: : :
Sand pump	Dia 75m/m	8	16,000	: : :
Centrifugal pump	Dia 100m/m	4	8,000	: : :
Turbin pump	Dia 75m/m	2	5,000	: : :
Filter press	900m/m sq. 40	6	27,000	: : :
Sieving machine	Length 900m/m wide 600m/m	2	16,000	Expansion :
Shaft Kiln	Dia 1.5m Height 5m	10	200,000	: : :
Lime slaking Tank	Dia 1.6mx1.8m	3	21,000	Repair : :
Reservior (under ground)	L 3mxW 2.5m H 1.5m	2	14,000	: : :
Lime milk Reservior	Dia 4mx4.5m	4	18,000	: : :
Reaction Tank	Dia 2.5mx2.7m	15	112,500	: : :
Settling Tank	L 6mxW 4mxH 1.5m	18	81,000	: : :
$Mg(OH)_2$ Reservior	Dia 4mx4.5m	5	22,500	: : :
Dump Car	Gauge 2.4 inches 0.4M_3	14	7,000	: : :
	: 30 :	300	90,000	: : :
Plate for drying	L 1.2mxW 0.8m	1,000	35,000	: : :
Turn Table	Gauge 24 inches	10	20,000	: : :
Rail line			20,000	: : :
Bulb	3 and 4 inches	111	120,600	Purchase
Settling Works for above	machines		126,000	: :
Total			¥1,038,700	

(5) Materials

Term	Name of materials	Quantity wanted	Details		Remarks
			on hand	Allotment wanted	
First quarter of year d. :	Common steel	43,200 Kg	20,200 Kg	23,000 Kg	
	Pig iron	5,800 :	5,800 :		
	Carbide	4,500 :		4,500 :	

Detailed list for (5) materials

Name of materials	Kind	Standard & size	Unit	Quantity	Unit price	Total amount	Date of Notification of Japanese Gov. Price Board
Common steel	Channel bar	8×200×90	Ton	6.0	¥ 6,590	¥ 39,540	as of 1947 7 12
		6.5×150×75	:	2.0	6,590	13,180	:
		5×100×50	:	0.5	6,890	3,445	:
	Angle bar	9×75×75	:	1.0	6,290	6,290	:
		6×75×75	:	2.0	6,290	12,580	:
		8×65×65	:	1.5	6,290	9,435	:
		3×40×40	:	1.2	7,490	8,748	:
	Round bar	Round 25	:	1.0	5,990	5,900	:
	Iron plate	6×5×10	:	12.0	7,610	9,132	:
		6×4×8	:	1.4	7,610	10,654	:
		6×3×6	:	1.6	7,610	12,176	:
	Gas pipe	with nat 4	:	3.0	11,070	33,210	:
		3	:	7.0	11,070	77,490	:
		2	:	2.0	11,400	22,800	:
		1	:	0.5	13,280	6,640	:
		1/2	:	0.5	14,390	7,195	:
Pig iron	Casting use	No. 2	:	5.8	3,200	18,560	:
Carbide		No. 4	(22.5 Kg) Can	200	190	38,000	: 8 12
Total						¥335,065	

Note: All total amount containing transportation fare ¥347,075

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(6) Amount of output, Worked up and Income

(a) Capacity, actual amount of output at present.

Name of products	Capacity		Actual production in a year
	Quantity	Amount	
Magnesia clinker	4,320T	¥34,560,000	None

(b) Capacity increased and estimated amount of out-put by expansion and improvement of the business facilities (per year)

--None-- (only maintain present capacity)

Name of products	Capacity		Amount scheduled		Main customer
	Quantity	Amount	Quantity	Amount	
Magnesia clinker	4,320T	¥34,560,000	3,600T	¥28,800,000	Nihon Iron Mfg. Co. Ltd. Yawata Factory. Fuso Metal Ind. Co. Ltd. Nissin Chemical Ind. Co. Ltd.

(7) Necessary operating materials

(a) Operating materials at present (per month)

--None--

(b) Increased operating materials by the expansion and improvement of the facilities (per month)

Name of goods	Quantities	Unit price	Amount	Method of acquiring	Remarks
Lime stone	900 Tons	300 Yen	¥270,000		
Senseki (natual cokes)	225 :	1,250 :	281,250	Coal Distribution Corporation	
Coal	450 :	1,100 :	495,000	:	
Cokes	90 :	2,600 :	324,000	:	
Power	21,500 KWH	0.6:	12,900	Chugoku Power Distribution Co.	
Sea water	36,000 Tons				
Total			¥1,383,150		

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Detailed list (per month) for (7) necessary operation materials (b)

Name of material	Kind	Standard	Unit	Quantity	Unit price	Total amount	Date of Notification of Japanese Gov. Price Board
Limestone		High grade	Ton	900	¥ 300	¥ 270,000	as of 1946 5 18
Coal	No.5	Block	:	225	1,249	281,000	as of 1947 3 12
	No.1	Block	:	450	1,068	480,000	:
		No.2	:	90	3,624	326,160	: 11 1
Coke			:			12,900	: 7 16
Power			K.W.H.	21,500	0.6		
Total						¥1,370,680	

Note: All total amount containing transportation fare ¥1,383,150

(8) Time of Execution

Time of works start.	Within a week after permission.
Time of works complete.	Within 4 months after permission.
Time of operation start.	We shall start the operation utilizing a part of equipment as soon as possible, after the permission, and produce magnesium hydrooxide, and the production of magnesia clinker shall be started after the completion of the construction of the Kiln for magnesia clinker. We expected, the time of operation of all equipment shall be on Sep. 1st. 1948.

(9) Method of acquiring necessary funds.

Term of expenditure	Total amount	Self funds	Loan	Remarks
First quarter of 1948	¥2,096,609	¥46,609	¥3,050,000	Financial Corporarion for Reorganization and Reconstruction
Second quarter of 1948	¥1,000,000			

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Prospectus of Income and Expenditure (one year)

1. Income			
Sales of Magnesia clinker 3,600 tons per year, unit price ¥9,000			¥32,400,000
2. Expenditure			¥28,800,000
Cost of Magnesia clinker sold			
The items			
Cost of materials	¥ 3,240,000		
Cost of fuels	13,200,000		
Cost of power	216,000		
Wages and Salaries	3,600,000		
Building and Machinery repairs and factory supplies	1,800,000		
Other miscellaneous Expenses	6,264,000		
Depreciation	480,000		
3. Net profit for the term			¥ 3,600,000

APPLICATION FOR APPROVAL OF
INSTALLATION OF BUSINESS FACILITIES

Senior Managing Director. A. Monobe

The Riken Metal Mfg. Co. Ltd.

Date, April 1948.

To: Finance Minister Tokutaro, Kitamura.

From: Riken Kinzoku Kabushiki Kaisha,
(The Riken Metal Mfg. Co. Ltd.)

Subject: Application for approval of Installation (expansion and improvement) of Business Facilities.

Applicant:

1. Trade Name. The Riken Metal Mfg. Co. Ltd.
2. Address. Umetatechi Okikaimen Ogushi Oaza Ube-city Yamaguchi Pref.
3. Name of Representative.
Chief Managing Director. Hideo, Monobe.
4. Authorized Capital.
¥14,300,000
5. Paid-up Capital.
¥14,300,000
6. Type and contents of Business.

(1) Manufacture and Sales of Metalic Magnesium and other metals.
(2) Manufacture and Sales of various kind of light alloys and copper alloys.
(3) Manufacture and Sales of potassium chlorate and other chemical products.
(4) Manufacture and Sales of various kind of goods produced from bitter brine as the raw materials.
(5) All other business pertaining to the above item.

Application for approval of the above subject matter is submitted as follows:

1. Detailed plan for Installation, Expansion and Improvement of Business Facilities.

Name of plan: Production plan of Magnesia clinker, by expansion and improvement of the production equipments of Magnesium Hydrovide, which now we posses.

Location: In Ube Factory of The Riken Metal Mfg. Co. Ltd. at Ube-city Yamaguchi Pref.

Detailed plan:

(1) Buildings and other structures.

Name of Bld.	Type	No. of Bld.	Area M_2	Remarks
Lime Kiln Works	Iron frame 3 storied Wooden frame 1 storied Roofed with slate	1	842.5	Repair (Home work)
Lime Slaking Works	Wooden frame 2 storied Roofed with slate	1	198.0	: : :
Stiring Tank Works	Wooden frame 1 storied Roofed with asphalt roofing	1	198.0	: : :
Shed for Reaction Tank and Lime milk, and pump Room	: : : :	1	264.0	: : :
Filter Press Room	Wooden frame 1 storied Roofed with slate	1	198.0	: : :
$Mg(OH)_2$ Drying Yard	Wooden frame hut Roofed with cryptomeria-bark	5	940.5	Expansion :
Lime Kiln	1 set			Repair : :
Magnesia Kiln	2 set			Expansion :
Attached Structure	Rail line and others			Repair : :

(2) Machines, Tools and Apparatuses.

Name	Type	Number	Remarks
3 Phase Induction Motor	7.5Hp	15	Repair (Home Work)
3 : : :	5 :	11	: : :
3 : : :	3 :	19	: : :
Elevator	Head 10m, Capacity 2 Tons	1	: : :
Skip Hoist	: 4m, : 0.5 :	2	: : :
Motor Winch	Capacity 1 Ton	3	: : :
Roll Crusher	Dia 600m/m wide 300m/m	1	: : :
Sund Pump	: 75m/m	8	: : :
Centrifugal Pump	: 100m/m	4	: : :
Turbin Pump	: 75m/m	2	: : :
Filter Press	900m/m Sq. 40	6	: : :
Sieving machine	Length 900m/m Wide 600m/m	2	Expansion :
Shaft Kiln	Dia 1.5m Height 5m	10	: : :
Lime slaking Tank	: 1.6m×1.8m	3	Repair : :
Reservior (under ground)	L 3m×W 2.5m×H 1.5m	2	: : :
Lime milk Reservior	Dia [illegible]	[illegible]	: : :

Name of Bld.	Type	No. of Bld.	Area	Remarks
Lime Kiln Works	Iron frame 3 storied Wooden frame 1 storied Roofed with slate	1	342.6 M_2	Repair (Home work)
Lime Slaking Works	Wooden frame 2 storied Roofed with slate	1	198.0	: : :
Stiring Tank Works	Wooden frame 1 storied Roofed with asphalt roofing	1	198.0	: : :
Shed for Reaction Tank and Lime milk, and pump Room	: : : :	1	264.0	: : :
Filter Press Room	Wooden frame 1 storied Roofed with slate	1	198.0	: : :
$Mg(OH)_2$ Drying Yard	Wooden frame hut Roofed with cryptomeria-bark	5	940.5	Expansion :
Lime Kiln	1 set			Repair : :
Magnesia Kiln	2 set			Expansion :
Attached Structure	Rail line and others			Repair : :

(2) Machines, Tools and Apparatuses.

Name	Type	Number	Remarks
3 Phase Induction Motor	7.5Hp	15	Repair (Home Work)
3 : : :	5 :	11	: : :
3 : : :	3 :	19	: : :
Elevator	Head 10m, Capacity 2 Tons	1	: : :
Skip Hoist	: 4m, : 0.5 :	2	: : :
Motor Winch	Capacity 1 Ton	3	: : :
Roll Crusher	Dia 600m/m wide 300m/m	1	: : :
Sund Pump	: 75m/m	8	: : :
Centrifugal Pump	: 100m/m	4	: : :
Turbin Pump	: 75m/m	2	: : :
Filter Press	900m/m Sq. 40	6	: : :
Sieving machine	Length 900m/m Wide 600m/m	2	Expansion :
Shaft Kiln	Dia 1.5m Height 5m	10	: : :
Lime slaking Tank	: 1.6m×1.8m	3	Repair : :
Reservior (under ground)	L 3m×W 2.5m×H 1.5m	2	: : :
Lime milk Reservior	Dia 4m×4.5m	4	: : :
Reaction Tank	: 2.5m×2.7m	15	: : :
Settling Tank	L 6m×W 4m×H 1.5m	18	: : :
$Mg(OH)_2$ Reservior	Dia 4m×4.5m	5	: : :
Dump Car	Gauge 2.4 Inches 0.4M_3	14	: : :
	: 30 :	300	: : :
Plate for Drying	L 1.2m×W 0.8m	1,000	: : :

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Name	Type	Number	Remarks
Turn Table	Gauge 24 inches	10	Repair (Home Work)
Rail Line			: : :
Bulb	3 and 4 inches	111pcs.	Purchase
Settling Works for above machines			

2. Summary of Budget.

Cost of Repair and Expansion for Buildings and other structures. ¥2,057,909

Cost of Repair and Expansion for Machines, Tools and Apparatuses. ¥1,038,700

Total ¥3,096,609

3. Time of Execution.

Time of works start. Within a week after permission.
Time of works complete. Within 4 months after permission.
Time of operation start. We shall start the operation utilizing a part of equipment as soon as possible, after the permission, and produce Magnesium Hydroxide, and the production of Magnesia clinker shall be started after the completion of the construction of the Kiln for Magnesia clinker. We expected, the Time of operation of all equipment shall be on Sep. 1st. 1948.

4. Method of acquiring necessary Funds and Materials.

(a) Method of acquiring necessary Funds.

(1)Self Fund. ¥ 46,609
(2)Loan (Financial Corporation for Reorganization and Reconstruction) ¥3,050,000

Total ¥3,096,609

(b) Method of acquiring necessary materials.

We are planning to appropriate strenuously the materials on hand for execution of the works.

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Necessary materials mentioned as follows.

Name of materials	Total quantity	Materials on hand	Materials to be purchase
Timber	577 Koku	200 Koku	377 Koku
Cement	12,100 Kg	0	12,100 Kg
Slate (cement)	250 pcs	0	250 pcs
Magnesia slate	350 Tubo	350 Tubo	0
Glass	1,300 M2	0	1,300 M2
Fire Proof Brick	8,850 pcs	2,850 pcs	6,000 pcs
Common Brick (red)	26,500 :	3,500 :	23,000 :
Carbide	5,500 Kg	0	5,500 Kg
Steel	67,700 :	20,700 Kg	47,000 :
Steel (secondary products)	4,935 :	270 :	4,665 :

5, Reasons necessitating such Installation, Expansion and Improvement:

We had been producing metalic magnesium since 1935 to the end of the war at our Ube-plant. In process of magnesium production we adopted the electrolysis method of dehydrous magnesium chloride which was produced by dehydration of bitter brine.

But we started another method since 1940 for the purpose of cutting down the quantity of bitter brine of which supply was limited to some amount because of several natural phenomena and also aiming to lighten the difficulties caused in the process of dehydrating operation.

The new method was like that---

Magnesium hydrooxide thrown in to the electrolysis tank reacts with chlorine gas which generates from electrolysis of magnesium chloride that is inrested aside, and by reaction of them there is produced magnesium chloride successively of which electrolysis finally produces magnesium.

Toward the war-end, our process mostly depended on this new method.

Magnesium hydrooxide is produced through the process of reaction, precipitation, filtering, lastly drying of mixed solution of sea water or magnesium chloride solution with milk of lime.

As we have in our plant the equipments of magnesium hydrooxide production covering the capacity of 600 tons per month, we made up our plan to produce magnesia clinker 360 tons per month utilizing these equipments by calcination of magnesium hydrooxide.

We have also lime kiln apparatus of which capacity is 50 tons daily in order to supply quick lime as raw materials.

All these equipments, owing to the shortage of repair materials and hard operation in the war-time, were considerably worse state at the war-end, and as we have been stopping operations in these works without any repair, it is necessary to mendand repair almost all parts of these equipments.

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Nowaday the demand for magnesia clinker became high in the iron industry and others, but the possibility of import of magnesite is of very little hope at present and besides home production is very scarce.

From these points of view, we have decided our plan to manufacture magnesia clinker to provide with the increasing demand after the rapid completion of repair and improvement works of our present equipments.

This plan virtually aims at repair works of equipments now at rest and we have only to build newly the drying works of magnesium hydrooxide in building, and also magnesia clinker kiln as well as oscillating screen in machinery.

6. In case where borrowing of Funds or withdrawal of Deposits is contemplated.

(a) Amount, Time and Method of such borrowing or withdrawal.
Amount of Borrowing of Funds ¥3,050,000
Time : : June 1st 1948
Method : : by discounting of Bill

(b) Party to be the source of such borrowing.
Financial Corporation for Reorganization and Reconstruction.
(Hiroshima Branch Office)

(c) Reasen necessitating such action.
At present we have only necessary funds for ordinary operation of the business, therefore as we need large sum of funds for executing the expansion and improvement of the equipments in this time, we have to borrow the necessary funds from the Financial Organs.

7. Other relevant facts.

Magnesia clinker that we are now planning to produce, as mentioned in this application, are chiefly useful for the basement of the furnace in the steel foundry.
We send the samples of magnesia clinker, that we produced, to the Yawata Steel Foundry of the Nihon Iron Mfg. Co. Ltd. and the Fuso Metal Ind. Co. Ltd. and we found that our magnesia clinker were suitable for their purpose after their experiment.

Attached Documents.
(1) Articles of Incorporation, latest Balance Sheet and Profit and Loss Statement.

(2) Detailed Business plan and account for estimated Income and expenditures following exeration of such Installation, Expansion and Improvement of Business Facilities.

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(3) Document of appraisal, in case of purchases of Business Facilities.

(None)

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BALANCE SHEET
as of March 31st 1946

The Riken Metal Mfg. Co. Ltd.

Assets

Item		Amount
	Current Assets	
(1)	Cash and Deposit	1,981,381.41
(2)	Deposit of reserve for Taxes	100,000.00
(3)	Advance for trade payment	625,288.49
(4)	Account Receivable	5,289,363.61
(5)	Inventory Assets	
	(a) Materials and Factory supplies	2,812,427.70
	(b) Partly finished products and goods in process	324,149.93
	(c) Finished goods	161,253.65
	Total Current Assets	11,503,869.79
	Investment	
(6)	Shares of Company	1,017,110.00
(7)	Shares of Trade association	43,000.00
(8)	Long Term Investment (National Bond)	60,467.00
	Total Investment	1,120,577.00
	Fixed Assets	
(9)	Equipments of Ube-factory	12,038,697.07
(10)	Equipments of Tokyo-factory	1,438,268.21
(11)	Equipments of Setoda Branch factory	537,995.96
(12)	Construction in process	8,404,784.13
	Total Fexed Assets	22,419,645.31
	Deferred charges and Prepaid Expenses	
(13)	Prepaid Expenses	52,743.86
	Total Prepaid Expenses	52,743.86
	Intangible Assets	
(14)	Goodwill and Patent Right	270,510.00
	Total Intangible Assets	270,510.00
	Other Assets	
(15)	Guaranty Money	101,115.00
	Total Other Assets	101,115.00
	Loss	
(16)	Loss brought forward	920,880.65
(17)	Loss for current term.	1,510,673.15
	Total Loss	2,431,553.80
	Total Assets	37,990,014.76

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Liabilities and Net Worth

Item		Amount
	Current Liabilities	
(1)	Account payable	397,684.67
(2)	Account Liabilities	509,368.84
(3)	Other current Liabilities	
	(a) Advances from Trade customers	41,800.00
	(b) Other Advances	561,413.59
	Total Current Liabilities	1,510,266.10
	Long Term Liabilities	
(4)	Long Term Loans and Note payable	21,261,769.12
	Total Long Term Liabilities	21,261,769.12
	Reserve	
(5)	Reserve for Taxes	115,884.54
	Total Reserve	115,884.54
	Net Wroth	
(6)	Capital stock authorized	14,800,000.00
(7)	Legal Reserves	237,095.00
(8)	Special Reserves	65,000.00
	Total Net Worth	15,102,095.00
	Total Liabilities and Net Worth	37,990,014.76

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STATEMENT OF PROFIT AND LOSS

(from Oct. 1 1945)
(to Mar. 31 1946)

Profit		Loss	
Sales	500,830.15	Cost of good sold	266,801.78
Interest Received	8,643.04	Loss of ship Dept	4,288.42
Dividend Received	460.45	Interest Expenses	541,774.02
Other Income	515,800.33	War Damages	41,236.37
Net Losses for Term	1,510,673.15	Evacuation Expenses	515.00
		Idle cost	1,334,542.08
		General and Administrative Expenses	54,444.43
		Retirment Expenses	138,400.00
		Other Expenses	154,403.01
Total	2,536,407.11	Total	2,536,407.11

(New account)

BALANCE SHEET
as of Jan. 31 1948

The Riken Metal Mfg. Co. Ltd.

Assets	
Equipments of Ube plant	¥ 4,028,867.60
Equipments of Branch plant	473,733.97
Equipments of Tokyo Branch Office	10,430.28
Construction in process	1,181,192.30
Raw materials and Manufacturing supplies	3,001,475.71
Partly-finished products	653,892.39
Finished goods	1,865,166.10
Godis in process	536,693.27
Debentures	19,360.00
Guarentee Money	98,490.00
Account Receivable-Trade	1,140,740.33
Account Receivable-others	191,359.77
Prepaid Expenses	22,536.84
First Restricted Deposits	17,161.05
Free Deposits	110,417.86
Transfer Deposits	4,639.33
Cash on hand	541,463.04
Tokyo Factory Accounts	1,449,414.55
Setoda Branch Works Accounts	2,260,786.64
Cost of Materials	663,827.83
Cost of Labor	264,652.79
Manufacturing Expenses	353,102.17
Selling Expenses	134,739.00
General and Administrative Expenses	395,645.75
Cost of goods sold	10,633,381.60
Interest Expenses	104,257.80
Taxes and others	2,580.80
Rent (land)	570,148.20
Idle cost	178,945.42
Tax for non-war damage	10,782.00
Other miscellaneous Expenses	4,270.05
Total	¥31,638,275.28

Liabilities	
Long Term Loans from Bank	¥ 1,760,000.00
Account payable-Trade	1,373,944.67
Advances from Trade Customers	206,397.00
Employees Deposits	85,593.97
Other Liabilities	447,182.84
Other Deferred Income	528,403.50
Reserves for Depreciation	72,756.72
Due to Old Account	10,276,065.53
Amount of Sales	14,587,085.62
Interest Received	9,032.63
General and Administrative Expenses (suspense)	356,487.25
Expenses of Ships Dept.	145,842.83
Other miscellaneous Income	1,789,402.72
Total	¥31,638,275.28

(Old account)

BALANCE SHEET
as of Jan. 31 1949

Assets	
Equipments of Ube-plant	¥ 6,649,961.75
Equipments of Branch plant	114,913.00
Equipments of Tokyo-plant	1,360,264.68
Equipments of Hirao Branch plant	34,222.89
Construction in process	4,974,166.45
Patent Right	229,510.00
Good will	41,000.00
Partner ship Investment	56,000.00
Raw materials and Factory supplies	992,355.28
Partly Finished Products	30,000.00
Capital participation	986,750.00
Guarantee Money	25.00
Advances for Trade payment	814,867.81
Account Receivable-Trade	140,119.64
Account Receivable-others	196,164.55
Prepaid Expenses	3,816.56
Second Restricted Deposits	34.65
Due to New Account	10,276,065.53
War Indemnity Tax	7,184,561.02
Offices Allowances	1,500.00
Cost of goods sold	2,370.58
Interest Expenses	300.43
Taxes	125,954.34
Idle cost	166,633.31
Administrative Expenses for Reparation plant	39,512.22
Tax for non-war damage	597.00
Other miscellaneous Expenses	249,071.77
Loss brought forward	3,124,949.63
Total	¥37,796,190.09
Liabilities and Net Worth	
Capital (paid up)	¥14,800,000.00
Legal Reserves	237,095.00
Special Reserves	65,000.00
Long Term Loans from Bank	20,592,684.01
Account payable-trade	372,481.52
Advances from Trade Customers	23,277.21
Other Account ƒ payable	564,200.70
Deferred Income	16,217.92
Reserves for Taxes	15,884.54
Setoda Branch Works Account	50,733.07
Amount of Sales	23,319.00
Interest Received	1,918.17
Dividends Received	32,821.00
Rental Income	570,148.20
Other miscellaneous Income	430,409.75
Total	¥37,796,190.09

Detailed plan for Installation,
Expansion and Improvement
of Business Facilities

Name of plan:
Repair works of producing equipment of magnesium hydrooxide and production of magnesia clinker with some expansion.

Location:
The compound of Ube-plant,
The Riken Metal Mfg. Co. Ltd.
Umetatechi Okikaimen Oaza Ogushi Ube-city Yamaguchi Pref.

I. Land

(1) Land renting

Use	Location	Kind	Area	Owner	Rent-fare
Factory land	Umetatechi Okikaimen Oaza Ogushi Ube-city Yamaguchi Pref.	Reclamation	47,239 Tubo	Ube-Kosan Co.	2 Yen per year

No necessity to rent land newly because the compound of expansion is within this area.

(2) Buildings and other structures

Name of Bld.	Type	No. of Bld.	Area M_2	Cost of Repair and Expansion	Remarks
Lime Kiln Works	Iron frame 3 storied Wooden frame 1 storied Roofed with slate	1	842.6	¥ 292,029	Repair (Home Work)
Lime Slaking Works	Wooden frame 2 storied Roofed with slate	1	198.0	83,321	: : :
Stiring Tank Works	Wooden frame 1 storied Roofed with asphalt roofing	1	198.0	54,421	: : :
Shed for Reaction Tank and Lime milk, and pump Room	Roofed with asphalt roofing	1	264.0	75,410	: : :
Filter Press Room	Wooden frame 1 storied Roofed with slate	1	198.0	66,253	: : :
$Mg(OH)_2$ Drying Yard	Wooden frame hut Roofed with cryptomeria-bark	5	940.5	257,375	Expansion : -
Lime Kiln	1 set			32,860	Repair : :
Magnesia Kiln	2 set			843,384	Expansion :
Attached Structure	Rail line and others			354,856	Repair : :
Total				¥2,057,909	

Details of item (2)

(a) Wages for the construction

Kind of Works	Details	No. of Blg.	Area	Wages	Remarks
Roofing repair of Lime Kiln Works	Magnesia slate roofing	1	M_2 858.0	¥ 78,000	Repair (Home Work)
Repair of building of Lime Kiln Works	All around of works		842.0	21,000	: : :
Attached above repair	All around of works			24,000	: : :
Lime Kiln repair				25,000	: : :
Roofing repair of Lime slaking Works			198.0	21,000	: : :
Building repair				20,200	: : :
d.				2,500	: : :
Track repair					
Roofing repair of Sea water mixing Tank	All around			29,900	: : :
Shed for reaction tank and Lime milk and pump Room	Repair		792.0	30,900	: : :
Roofing repair				14,100	: : :
d.					
Building repair of Filter press Room	All around			8,500	: : :
Attached Works				30,500	: : :
d.					
Construction of $Mg(OH)_2$ drying Room	Ground works	5		137,500	
d.	Roofing, others				
Construction of magnesia Kiln				597,800	
Repair of other structures				198,500	Repair (Home Work)
Total				¥1,239,400	

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(3) Materials (for Buildings and other structure)

Term	Name of material	Quantity wanted	Details		Remarks
			on hand	Allotment wanted	
First quarter of year	Timber	577 Koku	200 Koku	377 Koku	
Ditto	Cement	12,100 Kg		12,100 Kg	
:	Iron bar	500 :	500 Kg		
:	Angle bar	18,870 :		18,870 :	
:	Iron plate	114,000 :		144,000 :	
:	Zinc gilded sheet	4,200 :		4,200 :	
:	Nail	12,230 :	4,400 Kg	7,830 :	
:	Attachment to rail line	3,870 :		3,870 :	
:	Slate	250 pcs	250 pcs		
:	Magnesia slate	825 M_2	825 M_2		Home made
:	Glass plate	1,300 :	1,300 :		
:	Fire brick	60,000 pcs		60,000 pcs	
:	Brick	26,500 :	3,500 pcs	23,000 :	
:	Fire clay	100 bale	100 bale		
:	Carbide	1,000 Kg		1,000 Kg	

Detailed list for (3) Materials
(for Buildings and Other Structure)

Name of material	Kind	Standard & Size	Unit	Quantity	Unit price	Total amount	Date of Notification of Japanese Gov. Price Board
Timber	general use	Pine 6.0-7.5×12-15	Koku	611	¥ 144	¥ 87,984	as of 1947 3 31
	: :	Cryptomeria 6.0-7.5×12-15	:	149	165	24,585	:
	(Note Total quantity of worked-up timber 460 Koku)						
	(Total price				230,000 Yen)		
	Tie	No. 4 grade	Piece	1,250	57	71,250	:
Cement		Portland	Ton	12	1,714	20,568	: 8 1
Common steel	Round bar	Round 13	:	0.1	6,890	689	: 7 12
	: :	Round 16	:	0.2	6,290	1,258	:
	: :	Flat 3×50	:	0.2	6,390	1,278	:
	Angle bar	9×75×75	:	6	6,290	37,740	:
	: :	6×65×65	:	3	6,290	18,870	:
	Iron plate	6×5×10	:	15	7,610	114,150	:
	Zinc gilded sheet	No. 29 3 6	:	45	78	3,510	: 8 1
	Nail	$1_1/_2$	Barrel (60 KG)	1	1,150	1,150	:
	:	2	:	2	930	1,860	:
	:	$2_1/_2$	:	2	920	1,840	:
	:	3	:	2	870	1,740	:
	:	4	:	1	815	815	:
Attachment to rail line	Joint plate	9 Kg	Ton	3	9,460	19,380	: 7 12
	Nail	Length 90mm	Piece	10,000	2.2	22,000	Estimated
	Balt nat	Length 42mm	:	3,000	6	18,000	:
Asbest slate		725 1,820mm	Sheet	250	187	46,750	as of 1947 9 1
Magnesia slate		16 square	Tubo	350	263	92,000	(no official price) Home made
Glass plate	Transparent		150 Feet case	10	1,842	18,420	as of 1947 8 5
Fire Brick	Clayey	No.2	Ton	20	2,060	41,200	: 9 11
	:	Special type	piece	850	50	42,500	Estimated
Brick	Red	1st grade	:	26,500	3.5	92,750	as of 1947 10 21
Fire clay	Clayey	No. 2	Ton	6	1,447	8,682	: 9 11
Carbide		No. 4	Can (22.5 Kg)	45	190	8,550	: 8 12
						¥799,917	
	Note: All total amount containing transportation fare and cost of working up of timber					¥997,719	

(4) Machines, Tools and Apparatuses

Name	Type	Number	Cost of Repair and Expansion	Remarks
3 Phase Induction Motor	7.5 Hp	15	₩ 15,000	Repair (Home Work)
3 : : :	5 :	11	8,800	: : :
3 : : :	3 :	19	13,300	: : :
Elevator	Head 10m Capacity 2 tons	1	20,000	: : :
Skip Hoist	Head 4m Capacity 0.5 :	2	14,000	: : :
Motor Winch	Capacity 1 tons	3	6,000	: : :
Roll Crusher	Dia 600m/m wide 300m/m	1	2,000	: : :
Sand pump	Dia 75m/m	8	16,000	: : :
Centrifugal pump	Dia 100m/m	4	8,000	: : :
Turbin pump	Dia 75m/m	2	5,000	: : :
Filter press	900m/m sq. 40	6	27,000	: : :
Sieving machine	Length 900m/m wide 600m/m	2	16,000	Expansion :
Shaft Kiln	Dia 1.5m Height 5m	10	200,000	: : :
Lime slaking Tank	Dia 1.6mx1.8m	3	21,000	Repair : :
Reservior (under ground)	L 3mxW 2.5m H 1.5m	2	14,000	: : :
Lime milk Reservior	Dia 4mx4.5m	4	18,000	: : :
Reaction Tank	Dia 2.5mx2.7m	15	112,500	: : :
Settling Tank	L 6mxW 4mxH 1.5m	18	31,000	: : :
$Mg(OH)_2$ Reservior	Dia 4mx4.5m	5	22,500	: : :
Dump Car	Gauge 2.4 inches 0.4M_3	14	7,000	: : :
	: 30 :	300	90,000	: : :
Flate for drying	L 1.2mxW 0.8m	1,000	35,000	: : :
Turn Table	Gauge 24 inches	10	20,000	: : :
Rail line			20,000	: : :
Bulb	3 and 4 inches	111	120,600	Purchase :
Settling Works for above	machines		126,000	: :
Total			₩1,038,700	

(5) Materials

Term	Name of materials	Quantity wanted	Details		Remarks
			on hand	Allotment wanted	
First quarter of year d. :	Common steel	43,200 Kg	20,200 Kg	23,000 Kg	
	Pig iron	5,800 :	5,800 :		
	Carbide	4,500 :		4,500 :	

Detailed list for (5) materials

Name of materials	Kind	Standard & size	Unit	Quantity	Unit price	Total amount -	Date of Notification of Japanese Gov. Price Board
Common steel	Channel bar	8×200×90	Ton	6.0	¥ 6,590	¥ 39,540	as of 1947 7 12
		6.5×150×75	:	2.0	6,590	13,180	:
		5×100×50	:	0.5	6,890	3,445	:
	Angle bar	9×75×75	:	1.0	6,290	6,290	:
		6×75×75	:	2.0	6,290	12,580	:
		8×65×65	:	1.5	6,290	9,435	:
		3×40×40	:	1.2	7,490	8,748	:
	Round bar	Round 25	:	1.0	5,990	5,990	:
	Iron plate	6×5×10	:	12.0	7,610	9,132	:
		6×4×8	:	1.4	7,610	10,654	:
		6×3×6	:	1.6	7,610	12,176	:
	Gas pipe	with nat 4	:	3.0	11,070	33,210	:
		3	:	7.0	11,070	77,490	:
		2	:	2.0	11,400	22,800	:
		1	:	0.5	13,280	6,640	:
		1/2	:	0.5	14,390	7,195	:
Pig iron	Casting use	No. 2	:	5.8	3,200	18,560	:
Carbide		No. 4	(22.5 Kg) Can	200	190	38,000	: 8 12
Total						¥335,065	

Note: All total amount containing transportation fare ¥347,075

Detailed list for (5) materials

Name of materials	Kind	Standard & size	Unit	Quantity	Unit price	Total amount	Date of Notification of Japanese Gov. Price Board
Common steel	Channel bar	8×200×90	Ton	6.0	¥ 6,590	¥ 39,540	as of 1947 7 12
		6.5×150×75	:	2.0	6,590	13,180	:
		5×100×50	:	0.5	6,890	3,445	:
	Angle bar	9×75×75	:	1.0	6,290	6,290	:
		6×75×75	:	2.0	6,290	12,580	:
		8×65×65	:	1.5	6,290	9,435	:
		3×40×40	:	1.2	7,490	8,748	:
	Round bar	Round 25	:	1.0	5,990	5,990	:
	Iron plate	6×5×10	:	12.0	7,610	9,132	:
		6×4×8	:	1.4	7,610	10,654	:
		6×3×6	:	1.6	7,610	12,176	:
	Gas pipe	with nat 4	:	3.0	11,070	33,210	:
		3	:	7.0	11,070	77,490	:
		2	:	2.0	11,400	22,800	:
		1	:	0.5	13,280	6,640	:
		1/2	:	0.5	14,390	7,195	:
Pig iron	Casting use	No. 2	:	5.8	3,200	18,560	:
Carbide		No. 4	(22.5 Kg) Can	200	190	38,000	: 8 12
Total						¥335,065	

Note: All total amount containing transportation fare ¥347,075

DECLASSIFIED E.O. 12065 SECTION 3 (b)(1) NARA DATE

(6) Amount of output, Worked up and Income

(a) Capacity, actual amount of output at present.

Name of products	Capacity		Actual production in a year
	Quantity	Amount	
Magnesia clinker	4,320T	¥34,560,000	None

(b) Capacity increased and estimated amount of out-put by expansion and improvement of the business facilities (per year)

--None-- (only maintain present capacity)

Name of products	Capacity		Amount scheduled		Main customer
	Quantity	Amount	Quantity	Amount	
Magnesia clinker	4,320T	¥34,560,000	3,600T	¥28,800,000	Nihon Iron Mfg. Co. Ltd. Yawata Factory. Fuso Metal Ind. Co. Ltd. Nissin Chemical Ind. Co. Ltd.

(7) Necessary operating materials

(a) Operating materials at present (per month)

---None---

(b) Increased operating materials by the expansion and improvement of the facilities (per month)

Name of goods	Quantities	Unit price	Amount	Method of acquiring	Remarks
Lime stone	900 Tons	300 Yen	¥270,000		
Senseki (natual cokes)	225 :	1,250 :	281,250	Coal Distribution	
Coal	450 :	1,100 :	495,000	Corporation	
Cokes	90 :	2,600 :	324,000	:	
Power	21,500 KWH	0.6:	12,900	Chugoku Power Distribution Co.	
Sea water	36,000 Tons				
Total			¥1,383,150		

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Detailed list (per month) for (7) necessary operation materials (b)

Name of material	Kind	Standard	Unit	Quantity	Unit price	Total amount	Date of Notification of Japanese Gov. Price Board
Lime stone		High grade	Ton	900	¥ 300	¥ 270,000	as of 1946 5 18
Coal	No.5	Block	:	225	1,240	281,000	as of 1947 6 12
	No.1	Block	:	450	1,068	480,000	:
Coke		No.2	:	90	3,624	326,160	: 11 1
Power			K.W.H.	21,500	0.6	12,900	: ¥ 16
Total						¥1,370,060	
	Note: All total amount containing transportation fare ¥1,383,150						

(8) Time of Execution

Time of works start.	Within a week after permission.
Time of works complete.	Within 4 months after permission.
Time of operation start.	We shall start the operation utilizing a part of equipment as soon as possible, after the permission, and produce magnesium hydrooxide, and the production of magnesia clinker shall be started after the completion of the construction of the Kiln for magnesia clinker. We expected, the time of operation of all equipment shall be on Sep. 1st. 1948.

(9) Method of acquiring necessary funds.

Term of expenditure	Total amount	Self funds	Loan	Remarks
First quarter of 1948	¥2,096,609	¥46,609		
Second quarter of 1948	¥1,000,000		¥3,050,000	Financial Corporarion for Reorganization and Reconstruction

DECLASSIFIED E.O. 12065 SECTION 3 (E)(1)(D) NSC

Prospectus of Income and Expenditure (one year)

1. Income			
Sales of Magnesia clinker			
3,600 tons per year, unit price ¥0,000			¥52,400,000
2. Expenditure			
Cost of Magnesia clinker sold			¥28,800,000
The items			
Cost of materials		¥ 3,240,000	
Cost of fuels		13,200,000	
Cost of power		216,000	
Wages and Salaries		3,600,000	
Building and Machinery repairs and factory supplies		1,800,000	
Other miscellaneous Expenses		6,264,000	
Depreciation		480,000	
3. Net profit for the term			¥ 3,600,000

DECLASSIFIED E.O. 12065 SECTION 3 (E)(1) NND 969078

Feb 28 1946

APPLICATION FOR THE PERMISSION OF CONVERSION

TO THE ESSENCIAL CONSUMERS COMMODITIES.

THE RIKEN METAL CO. LTD. UBE FACTORY

OKI-KAIMEN-UMETATECHI, OGUSHI OAZA, UBE-CITY

YAMAGUCHI PREF.

Serial No. of Report.

Application for the Operation of
and
Report on Industrial Facilities.

To,
Thru, Yamaguchi prefectural Authorities.
Name, and Address of Reporting Unit.
Riken Metal Co. Ltd.
Oki-Kaimen-Umetatechi Ogushi Ube-city
Yamaguchi Pref.
Date. Feb. 28, 1946.

1. Name of Facility.
Riken Metal Co. Ltd. Ube Factory.

2. Location.
Oki-Kaimen-Umetatechi Ogushi Ube-city Yamaguchi Pref.

3. Name of President.
Akira, Araki.

4. History.
a, Date of construction Oct. 21, 1933.
b, Date of first operation. Jul. 7, 1935.
c, 1935-- 1941 production (Annual value in yen, quantities of principal products by units or weight)

1, Magnesium

Period	Quantities	Value in yen
1935	136.689 kg	¥ 273,378
1936	461.110	968,331
1937	828.529	1,988,469
1938	966.425	2,416,062
1939	861.517	2,584,551
1940	1,045.386	3,136,158
1941	1,107.563	3,322,689

2, Bromine

Period	Quantities	Value in yen
1939	79.488 kg	¥ 153,976
1940	135.677	325,625
1941	122.569	294,165

3, Flux

Period	Quantities	Value in yen
1937	37,949 kg	¥ 53,128
1938	264.402	397,703
1939	275.060	440,096
1940	217.820	391,536
1941	389.175	700,515

4, Kali-fertilizer

Period	Quantities	Value in yen
1940	827.250 kg	¥ 49,635
1941	207.630	13,288

5, Gypsum

1940	246.875 kg	¥ 3,703
1941	1,051.165	13,288

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6, Crude magnesium sulphate

Period	Quantities	Value in yen
1940	70,000kg	¥ 2,100
1941	80,000kg	2,800

7, Potassium Chlorate

Period	Quantities	Value in yen
1936	142,693kg	¥ 65,638
1937	215,951kg	114,454
1938	336,302kg	205,005
1939	209,803kg	121,685
1940	622,460kg	473,069
1941	890,885kg	610,334

8, Basic Magnesium Carbonate

Period	Quantities	Value in yen
1940	610,040	¥ 183,012
1941	175,544	74,606

d, Present Capitalization in yen
¥ 14,800,000.

e, Changs made in Capital structure since 1935
The capital of the company were ¥ 7,000,000 at the time of founding and paid up as below.

The first paid up	¥ 1,750,000	Oct.	21, 1933
The second :	700,000	Apr.	1, 1935
The third :	1,050,000	Apr.	1, 1937
The fourth :	1,750,000	Jul.	30,1938
The fifth :	1,750,000	Apr.	1, 1939
The paid up of incressed capital			
The first paid up	¥ 1,750,000	Dec.	1, 1939
The second paid up	1,750,000	Oct.	1, 1940
The third paid up	3,500,000	Mar.	1, 1945
Total	14,000,000		

Merging Riken Light Metal Co, Ltd., the capital increased by ¥ 800,000. on July 1, 1941 and the total amount of capital has become ¥ 14,800,000.

f, Name and addressof parent company
----None----

g, Number of shares outstanding 296,000

h, Number of stockholders (10 percent up)
The Fuso Metal Industry Co,,Ltd. 40.5%
The Institute of Physical and Chemical Reserch 7.2%

i, Fund received from Government
----None----

j, On reverse side give outline sketch of plant layout with approximate dimensions.
---Lay out map attached---

5.Description
a, Principal products
1. War-time
Magnesium. Bromine. Flux for Magnesium Alloy.
Kali-fertilizer. Gypsum. Crude-Magnesium Sulphate.
Potassium Chlorate. Basic Magnesium Carbonate.

2. At present
Kali-~~é~~ fertilizer. Magnesium Sulphate.
Charcoal ball.

3. Planned for 1946---1947.
Kali-~~é~~ fertilizer. Magnesium Sulphate. Gypsum.
Salt. Bromine (by bitter brine process)
Charcoal ball. Magnesia slate. Artificial ice.
Potassium Chlorate. Basic Magnesium Carbonate.
Bromine(by sea water procell) Magnesium.

b, Capacity.
1.War time.

Name of products	Capacity(p/year)	Remarks
Kali-fertilizer	1,000 tons	
Crude Magnesium Sulphate	300 :	
Gypsum	17000 :	
Bromine(bybitter brine process)	70 :	
Potassium Chlorate	720 :	
Basic Magnesium Carbonate	1,800 :	
Bromine (by sea water process)	480 :	
Flux(for Magnesium alloy)	600 :	
Magnesium	1,000 :	

Owing to the shortage of materials and workmen, we stopped the production of Potassium Chlorate from 1942 May and of Basic Magnesium Carbonate from Jan. 1942.

2, At present

Name of product	Capacity(p/year)	Remarks
Kali-fertilizer	3,000 tons	
Magnesium Sulphate	300 :	
Gypsum	1,000 :	
Bromine	70 :	Bitter brine process
Potassium Chlorate	400 :	
Basic Magnesium Carbonate	1,800 :	
Bromine	480 :	Sea-water process
Flux	600 :	
Magnesium	1,000 :	

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5, 1946--1947(with unrestricted acess to materials)

Name of products	Capacity(p/year)		Remarks
Kali-fertilizer	3,000	tons	
Magnesium Sulphate	300	:	
Gypsum	1,000	:	
Salt	600	:	
Bromine	70	:	Bitter brine process
Charcoal ball	720	:	
Magnesia slate	252,000	pcs	
Artificial ice	300	tons	
Potassium Chlorate	400	:	
Basic Magnesium Carbonate	1,800	:	
Bromine	360	:	Sea-water process process
Magnesium	1,000	:	
Caustic soda	2,400	:	

C, Number of employes

1. War-time

Staffs		Workers		School		Total	
men.	women.	men.	women.	men.	women.	men.	women.
139	1	1590	220	245	160	1974	381

2. At present

Staffs		Workers		School		Total	
men.	women.	men.	women.	men.	women.	men.	women.
46	0	149	32	0	0	195	32

3. 1946--1947 (at maximum capacity)

Staffs		Workers		Total	
men.	women.	men.	women.	men.	women.
36	0	1300	100	1336	100

6, Machinery & Equipment in plant (give type, size,use, makers name)

1. Magnesium Hydroxide works

Description	Quantity	Condition
Tank, slaking of lime dia 1.65 x 1.9m	3	Home made
Tank, producing of $Mg(oh)_2$ dia 2.5m x 2.7m	15	:
Tank, storaging of lime-milk dia 4.5m x 4.5m	4	:
Tank, settling of $Mg(oh)_2$ 6m x 4m x 1.2m	13	:
Tank, storaging of $Mg(oh)_2$ lime dia 4m x 4.5m	3	:
Filter-press, iron made,plate size 915 m/m	6	Kurimoto Tekko
Pret-mill , 10 tons p/day	1	:
Pulverizer, 10 tons p/day	2	Nara Kikai Co. Ltd.

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2. Bitter brine works

A Tank, storaging of bitter brine 11m x 11m x 2.6m 270m³			3	Home made
B Tank, storaging of bitter brine 13.6m x 13.6m x 3m 540m³			7	:
C Tank, storaging of bitter brine 13.45m x 6.9m 900m³			15	:
Tank, removing of sulphate 30m³			11	:
Volume-meter, steel made			6	:
Filter-press, iron made, plate size		810m/m	2	Osaka filter-press Co. Ltd.
Filter-press, wooden made	: :	810m/m	1	:
Centrifugal-separator, dia	: :	610m/m	3	Yamao Tekko-Sho
: : :	: :	780m/m	4	:
Concentrator of bitter brine		6 m³	2	Hidacho-Seisaku-Sho
Distilling still, stone made,		3.6 m³	3	Home made
Distillating tower,	: :	3.6 m³	1	:

3. Dehydration works

Volume-meter,	25 m³	2	Yamada Tekko-Sho Ltd.
:	4 m³	4	:
:	2 m³	2	:
Evaporating tower, dia 9m x 10m		3	Shimizugumi Co. Ltd.
Concentrator, 4.6m x 2.4m x 1.3m		18	Yamada-Tekko-Sho Ltd.
Elevator, 2 tons		1	Mitsubishi Electric Co.Ltd.
: 1 tons		1	Ube-Tekko-Sho Ltd.
Hoist, 0.5 tons		1	Hidachi Tekko-Sho Ltd.
Jaw-crusher, hopper size 510m/m x 255m/m		2	Ube Tekko-Sho Ltd.
: : 610 : x 381 :		1	: :
Backet-elevator, 15 tons p/h		2	Saikawa Tekko-Sho
Electric furnace, 500KVA		17	: :
Single phase transformer 500KVA 3300/100V		17	Mitsubishe Electric Co. Ltd.
Cooling tower 0.6m x 3m		12	Home made
Acid-proof fan, dia 350m/m		15	Nihon Gaishi Co. Ltd.
Absorption tower, porcelain made, 6m x 3m x 1.5m		1	Home made
Acid-proof pump : :	dia 810m/m	18	Nihon Gaishi Co. Ltd.

4. Electrolysis works

Electrolytic cell 5000A 10V	79	Saikawa Tekko Sho
Electrolytic cell(improved type)5000A10v	69	: :
Electrolyte melting Bath, (small size) 2 tons p/day	15	: :
Electrolyte melting Bath, (large size) 4 tons p/day	3	: :

Jaw-crusher, hopper size, 235m/m x 315m/m	2	Osaka Seisazoki Co. Ltd.
Backet-elevator, 3 tons p/h	2	Saikawa Tekko-Sho
Tank, storaging of electrolyte, 14 tons	6	: :
Hand-operated travelling crane, 2.5 tons	6	: :

5. Flux works

Reverberatory furnace 1.5 tons salt material p/day	1	Home made
: : 720kg : :	1	:
Conical tall mill, horizontal type 130 kg p/h	1	Kurimoto Tekko Co. Ltd.
Electric furnace, 5000 A 50 V	1	Home made
Conical tall mill, vertical type 400kg p/h	1	Kurimoto Tekko Co. Ltd.

6. Salt recovering works

Tank, dissolving residue, 18 m_3	2	Saikawa Tekko-Sho
: : : 10 m_3	2	: :
Jaw-crusher, hopper size 250m/m x500m/m	2	Ube Tekko-Sho
Filter-press, iron made, plate size 315m/m	7	Osaka filter-press Co.
: : : 236m/m	2	: :
Vacuum evaporator, triple effect, dia 1.640 m/m	2	Tsukishima-Kikai Co. Ltd.
Evaporator, dia 4400 m/m	7	Hidachi-Seisaku Co. Ltd.
Centrifugal-separator, dia 760 m/m	4	Rikagaku Kogyo Co. Ltd.
: : 815 :	2	: :
: : 610 :	2	Yamase-Tekko-Sho

7. Chlorine absorbing works

Fan, porcelain made dia 250m/m	4	Nihon-Gaishi Co. Ltd.
: : : 200 :	4	: :
: iron made, : 300 :	3	Osaka Sofuki Co. Ltd.
: rubber lined, : 300 :	2	Sanmei-Kogyo Co. Ltd.
Sand pump, iron made, 75 :	25	Homemade
Centrifugal pump, 75 :	1	:
Tank, slaking of lime, 5 m_3	3	Saikawa Tekko-Sho
Absorption tower, concrete made 75 m/m	15	Shimizugumi Co. Ltd.

8. Bromine works

Sea water tank, 25m x 30m x 3.2m 2400m_3	2	Shimizugumi Co. Ltd.
Single phase transformer, 75 KVA	3	Hidachi Seisaku-Sho
Pump, iron made, dia 306 m/m 50 HP motor attached	6	Yodogawa Pump Co. Ltd.
Reaction chamber, 20m x 6m x 2.8m	1	Shimizugumi Co. Ltd.
Generating tower, 3m x 3m x 19m	6	: :
Pump, iron made dia 250m/m 50 HP motor attached	6	Yodogawa pump Co. Ltd.

Absorption tower, 10m x 16m	2	Shimizugumi Co. Ltd.
Pump, for brominated soda solution, dia 250m/m	10	Yodogawa Pump Co. Ltd.
Blower, iron made, air vol 700m³/min press, 1200 m/m	6	Osaka-Sofuki Co. Ltd.
Single phase transformer, 150 KVA	3	Hitachi Seisaku Sho
: : : 100 :	2	: :
: : : 50 :	2	: :
Distillating tower stone made 0.9mx0.9m x7.2m	1	Home made
: still, stone made 3m x 2m	5	:
Tank, neutralizing, 3.3m x 3.2m x1.7m	2	:
: : dia 2m x 3m	1	:
Sulphuric acid tanks, dia 2.4m x 11m	2	Sanmei-Kogyo Co.Ltd.

9. Ethylen dibromide works

Alcohal tank, dia 1.5m x 4.9m 8m³	4	Karashima Tekko Sho
Volume meter, dia 1.1m x 1.35m 1m³	4	: :
Generator of ethylen, 3.24m x 2.51m x 4.3m	2	Home made
Air compressor, dia 139 m/m	1	Sanmei Kogyo Co. Ltd.
Ammonia refrigerator, cylinder dia 14 m/m	1	: :

10. Caustic soda works

Electrolytic cell 4000 A 4 V	64
Hand operated travelling orane, 3 tons	4
Hydrogen gas compressor 7 1/2 motor attached	1
Hydrogen gas tank	1
Vacuum evaporator, double effect, 7S tons	1
Pump dia 65 m/m	2
Salt purification apparatuses	1

We ordered the Sanmei Kogyo Co. Ltd. to make up the mechined and apparatuses, but we have gotten only a part of them.

Up to now and the other parts were kept in the hand of makers as semifinished products, and they will be completed within of one year, we suppose.

11. Sub-station

4000 KVA 11000/3300V 3 phase oil immersed self-cooled transformer	3	Mitsubishi Denki Co. Ltd.
3000 KW. D.C. 500 volts 6000 A grid-controlling mercury arc rectifier with necessary accessories.	1	: :
11000 volts 400 A cell compartment-mounting type oil cirouit breakers with panel.	12	: :
3300 KW D.C. 550 volts 6000 A grid-controlling mercury arc rectifier with necessary accessaries	2	A.E.G. Germany
1500 KW D.C. 250 volts 6000 A rotary convertar	1	Hidachi Seisaku Co. Ltd.

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12. Repair works

English type belt driven 12-0 gap engine lathe	(swing 30)	1 Rokuroku- Shokai
English type belt driven 12-0 gap engine lathe	(: 24)	1 Yamakatsu Shoten
English type : : 8-0 gap engine lathe	(: 20)	3 : :
: : : : 6-0 gap	(: 20)	3 : :
: : : : :	(: 17)	3 Okaya Kikai Co. Ltd.
: : : : :	(: 16)	1 Rokuroku Shokai
		1 : :
Threading machine bolt dia 1 1/4	(: 24)	1 : :
Upright drilling machine	(: 20)	2 Okaya Kikai Co. Ltd.
: : :	(: 12)	1 Home made
Bench drilling machine	(type No.2)	1 Okaya Kikai Co. Ltd.
Universal milling machine	(4-0 x 9-0)	1 : :
Planing machine		1 Rokuroku Shokai
Back-geared shaping maching stroke 22		1 Yamakatsu Shokai
: : : : 20		1 Rokuroku Shokai
Metal hack saw cutting dia 5		1 Home made
Plate bending roll		1 Sakai-Imonokikai Co.
Punching machine		1 Aida Seisakusho
Friction press (5 tons)		1 Osaka Denki Co. Ltd.
A.C. arc weider 20 KW		5 Hidachi-Seisaku-Sho
: : 3.5 KW		

13. Boiler room

Vertical marine type watertube boiler press 9 Kg/cm$_2$	2 Bub-Cock Co. Ltd
Cornish boiler press 7Kg/cm$_2$ heating surfsce 40.8sq.M.	2 Takao Tekko-Sho Co. Ltd.
Multitubular type horizontal boiler press 7 Kg/cm$_2$ heating surface 1075 sq.M.	1

14. Lime-kiln works

Lime-kiln dia 2m x 6.13m	4 Home made

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7, Present stocks of raw-materials, supplies and unfinished goods

Description	Unit	Quantity	Condition
Electrslyte	T	115.000	Civilian use
Quick-lime	:	116.766	: :
Bitter brine	K.L	1332.600	: :
Dried magnesium Hydroxide	T	633.000	: :
Potassium chloride	:	51.000	: :
Salt	:	90.000	: :
Lime-stone	:	1324.680	: :
Magnesite	:	45.000	: :
Calcium chloride solution	K.L	47.000	: :
Sulphuric acid 50° : : 60°	T :	97.000 19.955	: : : :

8, Present stocks of finished goods

Magnesium	T	15.091	Millitary and civilisn use
Bromine	:	1.375	: :
Kalifertilizer	:	384.000	Civilisn use

9. Present stocks of fuel

Smokeless coal	T	50.000
Lump coal(second class)	:	171.000
Dust coal(:)	:	150.000

10, Additional machinery and equipment needed for maximum production 1946-1947.

We need not additional machinery and equipment for the maximum production.

But caustic soda plants have destroyed by fire bombing, especialy three buildings (ware-house of salt, electrolysis room, electric room) have completly burned and damaged a part of machines and apparatuses in hand.

We desire to reconstruct the buildings and complete the machines and apparatuses, and we expect, the priod required for the reconstruction of buildings and the completion of machines and apparatuses, about 6 mouthes for the former and about one year for the latter.

11, Raw materials and supplies required (mouthly)

A. For present capacity (5 b 2 above)

Description	Unit	Quantity
Bitter brine	K.L	2,160

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Description	Unit	Quantity
Mg chloride solution	K.L	1,565
Caustic soda	K.G	76,090
Chlorin gas	:	45,000
Potassium chlorate	:	58,000
Salt	:	41,500
Lime stone	:	600,000
Smokless coal	:	100,000
Lump coal(second class)	:	1,500,000
Dust coal(second class)	:	730,000
Coke	:	10,000

B. For maximum (5 b 3 above)

Bitter brine	K.L	2,160
Mg chloride solution	:	1,565
Caustic soda	K.G	76,000
Chlorin gas	:	45,000
Potassium chlorate	:	58,000
Salt	:	241,500
Lime stone	:	600,000
Magnesia	:	75,000

12, Fuel requied (Mouthly)

Smokeless coal	K.G	150,000
Lump coal	:	1,500,000
Dust coal	:	960,000
Coke		

13, Additional personnel needed(not locally available)

Special skills	Number
-None-	-None-

14, Prices (Give current selling prices in yen of principal products)

Description	Unit	Price
Kafli-fertilizer	₹	¥ 700.
Magnesium sulphate	:	: 400.
Gypsum	:	: 60.
Salt	:	: 900.
Bromine(Bitter brine process)	:	: 16,200.
Charcoal ball	:	: 450.
Magnesia tile	pcs.	: 2.00
Artificial ice	₹	: 100.
Potassium chlorate	:	:12,000.
Basic magnesium carbonate	:	: 5,000.

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Description	Unit	Price
Bromine (sea water process)	¥	¥16,200.
Caustic soda	:	: 7,000.
Magnesium	:	:15,000.

15, Remarks.

We have very much difficulties to secure the materials such as salt, potassium choride and coal.

We have the plan of salt production, but it requires a long time for the construction of salt-field, then we desire the import of salt.

After the terminatøion of war, the abrogation of distribution control for the various goods, have caused the confusion of the distribution route, we wish the rational control for a while.

16, Certification by applicant.

I certify that the information contained ~~herein~~ herein is true to the best of my knowledge and belief.

Sighed. Akira Araki.

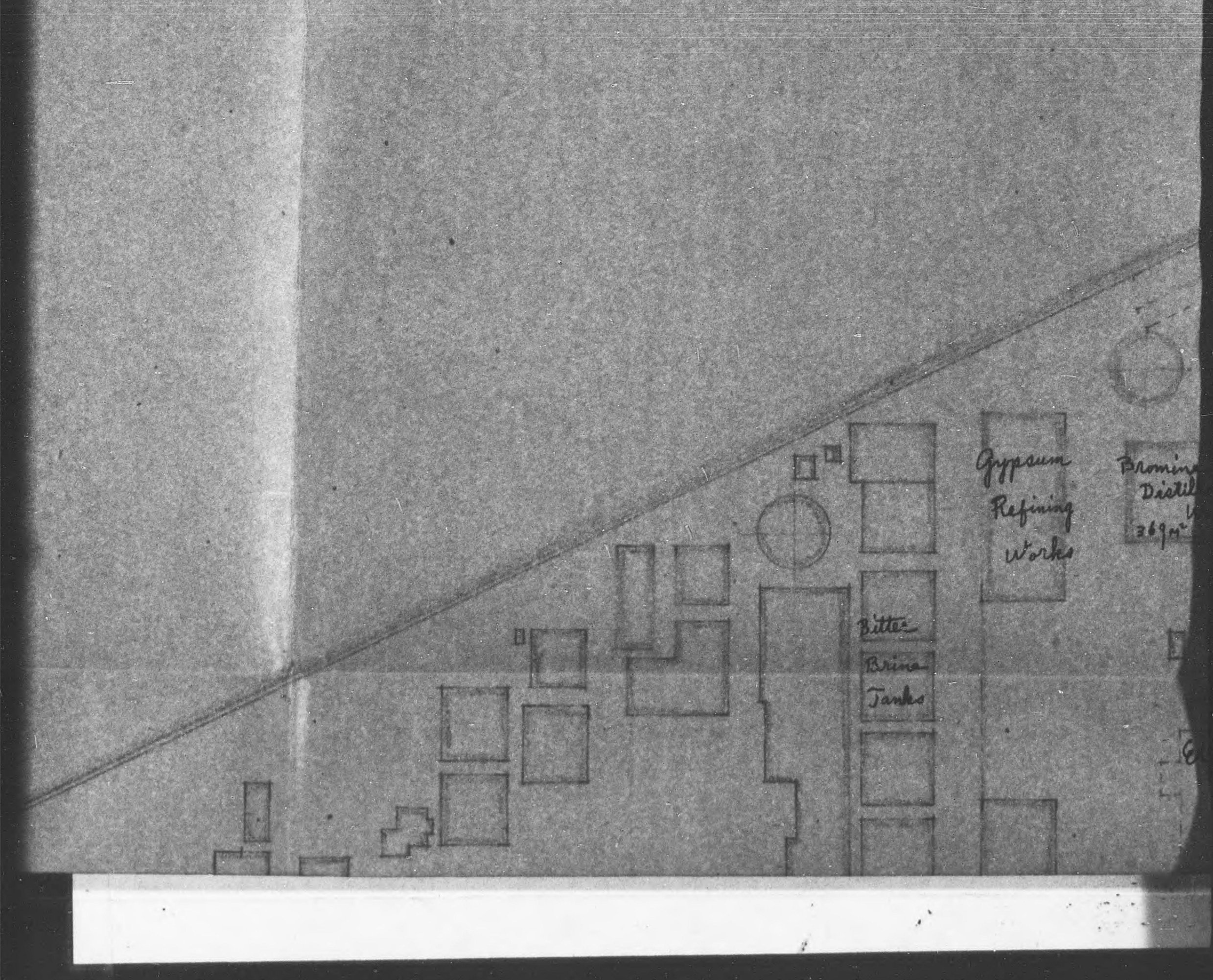
Title. President.

DECLASSIFIED E.O. 11652 SECTION 3 (E)(2) NND 760

Mark	Name	Numbers	Capacity	Manufacturer	Date of Acquisition
1	Mercury arc Rectifier	2	3300KW 440V 6000A	A.E.G Germany	1938
2	Mercury Arc Rectifier	1	3300KW 600V 5000A	Mitsubishi E.W	Dec 1943
3	Rotary Converter	1	1500 KW 250V 6000A	— " —	Jan 1935
4	3Phase Transformer	3	11000/3300V 4000KVA	— " —	2 1935
5	Single phase Transformer	14	3300/100V 500KVA	— " —	2 1940
6	Boiler	2	Presure 8T P/C²		7 1935
7	"	2	" 6T "	Kabuta Iron works	7 1940
8	Electric Furnace	14		Home made	Apr 1939
9	Electralysis Cell	163	10V 5000A	Home made	Apr 1938

	Manufacturer	Date of Acquisition
A	A.E.G Germany	1938
A	Mitsubishi E.W	Dec 1943
A	— " —	Jan 1935
A		2 1935
A	— " —	2 1940
A		7 1935
A	— " —	7 1940
		Apr 1939
	Kubota Iron works	Apr 1935
	Home made	
	Home made	

Riken Metal Manufacturing



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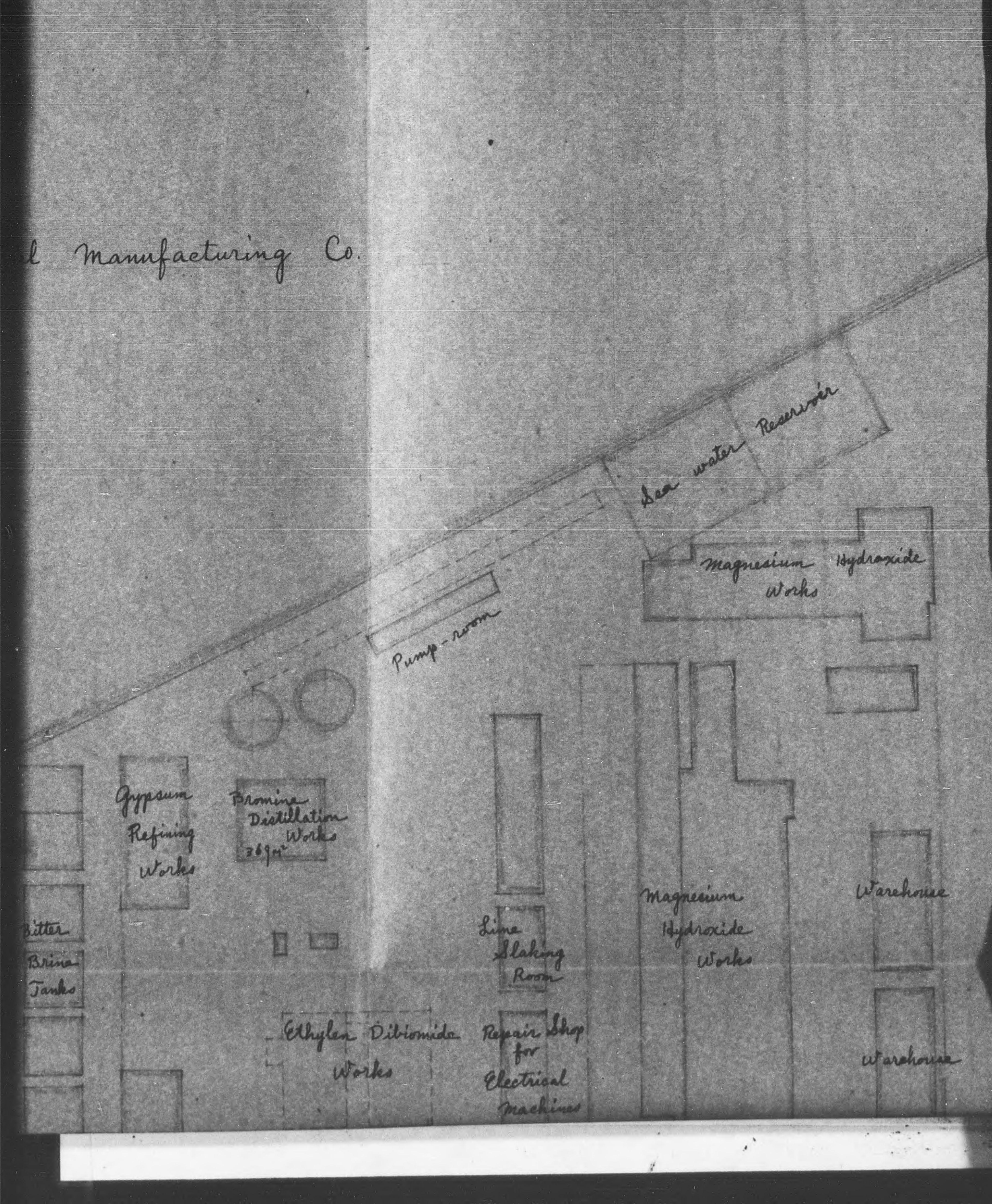
l Manufacturing Co.



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Reservoir

Magnesium Hydroxide Works

Warehouse

Warehouse

Warehouse

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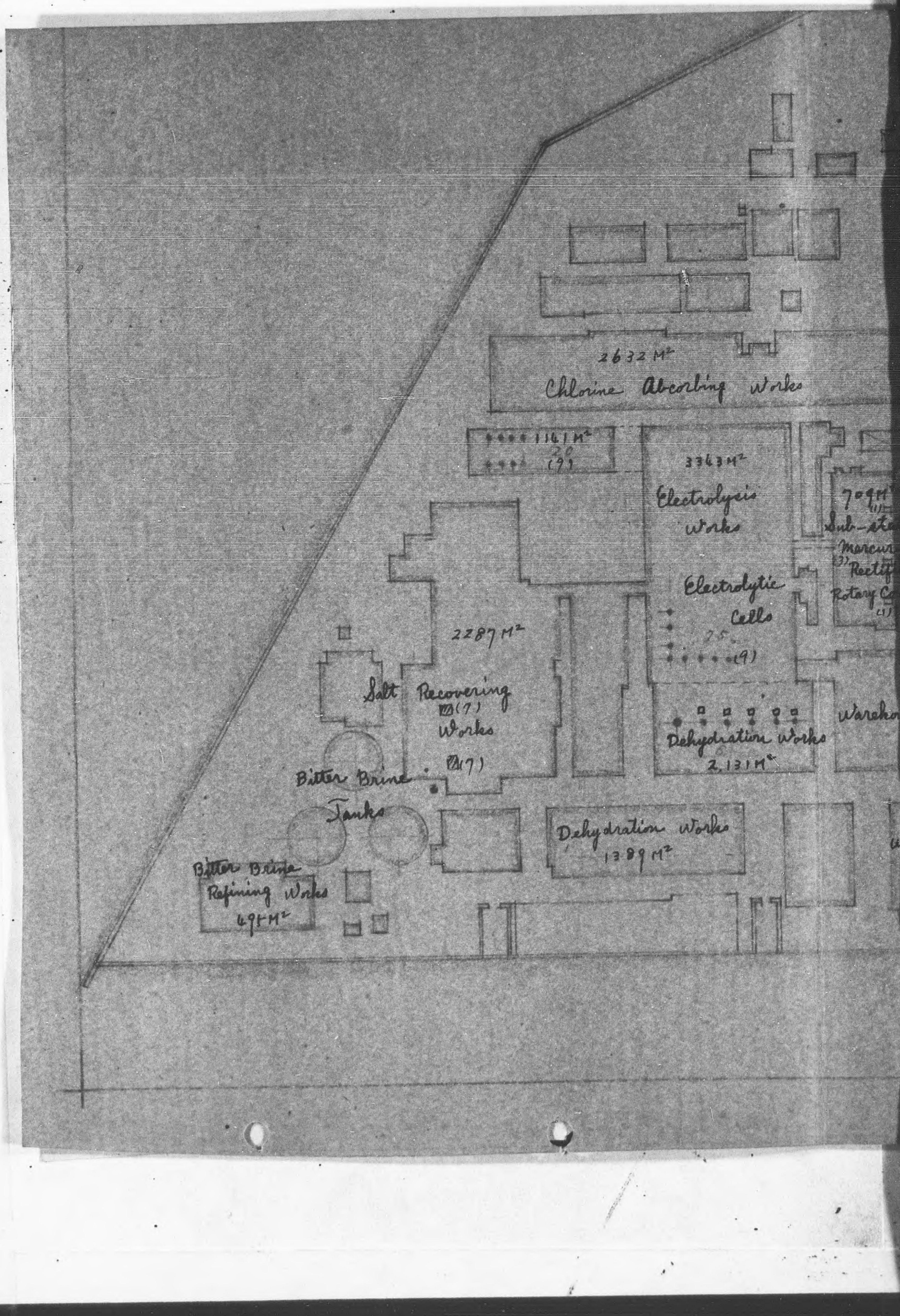
1/1000

20 " " 13

a Building damaged by Fire - bombing

b " " Bombing


2632 M²
Chlorine Absorbing Works
1161 M²
(9)
3363 M²
Electrolysis Works
Electrolytic Cells
(9)
2287 M²
Salt Recovering Works
(7)
Bitter Brine Tanks
Bitter Brine Refining Works
491 M²
Dehydration Works
1389 M²
Dehydration Works
2,131 M²

Tanks

Ethyl

Bitter Brine Concentrating Works 1686 M²

Bitter Brine Tanks

1287 M²
Bromine Distillation Works

2 M²
Absorbing Works

3343 M²
Electrolysis Works

709 M²
Sub-station
Mercury Arc Rectifiers (3)
Rotary Converter (1)

Electrolytic Cells
75
(9)

Dehydration Works
2,131 M²

Warehouse

3,093 M²
Electrolysis Works

Electrolytic Cells
(9)
58

Flux Works

Hydrochloric Acid Absorbing Works
351 M²

4411 M²
Dehydration Works

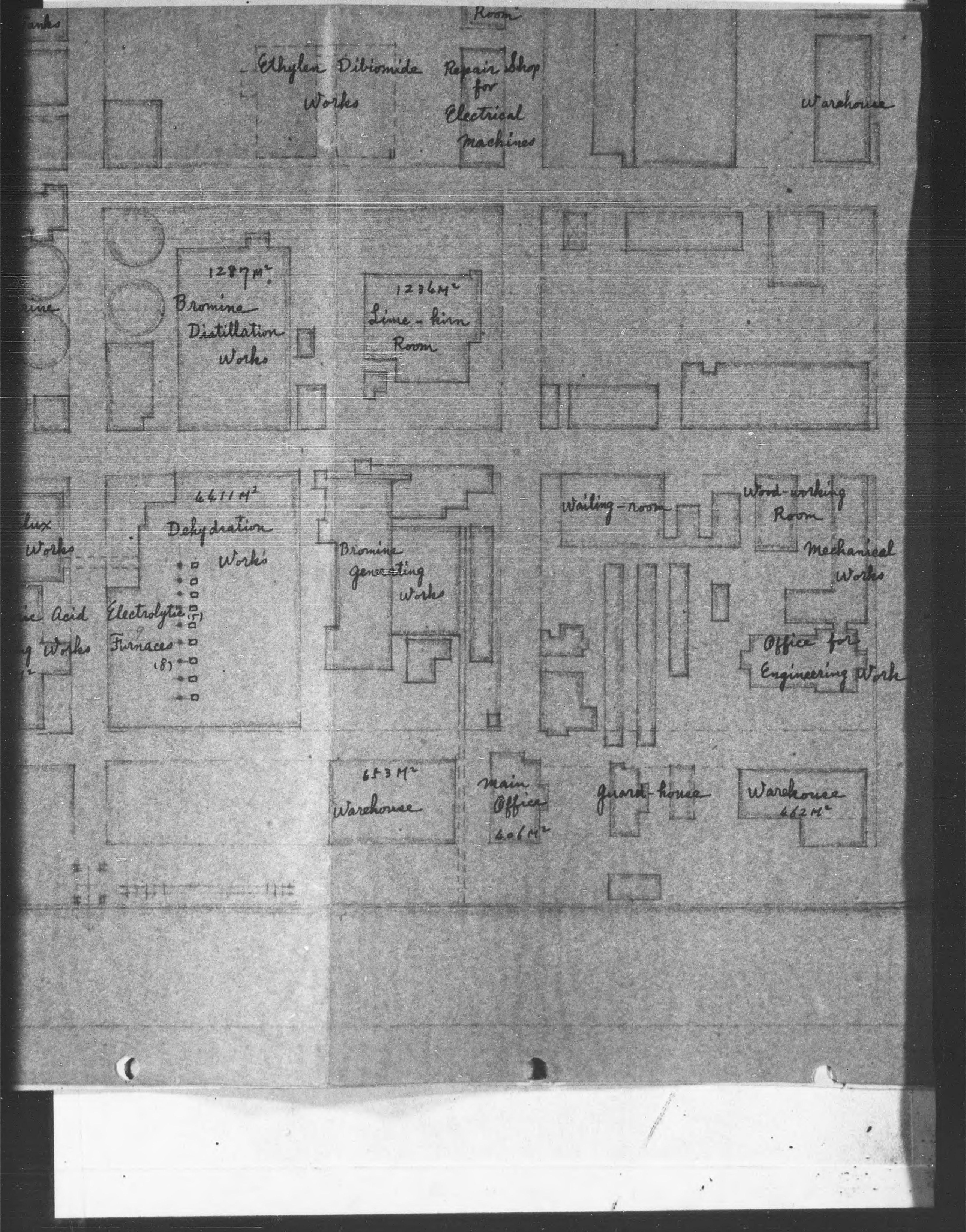
Electrolytic Furnaces
(8)

(5)

tion Works
9 M²

Warehouse

Main Sub-station
□□□ (4)
□ Transformers
(2) Mercury Arc Rectifier


anks
Ethylen Dibromide Works
Room
Repair Shop for Electrical machines
Warehouse
1287M²
Bromine Distillation Works
1236M²
Lime-kiln Room
ine
lux Works
ic Acid g Works
4611M²
Dehydration Works
Electrolytic Furnaces (8)
Bromine generating Works
Waiting-room
Wood-working Room
Mechanical Works
Office for Engineering Work
643M²
Warehouse
Main Office 406M²
Guard-house
Warehouse 462M²

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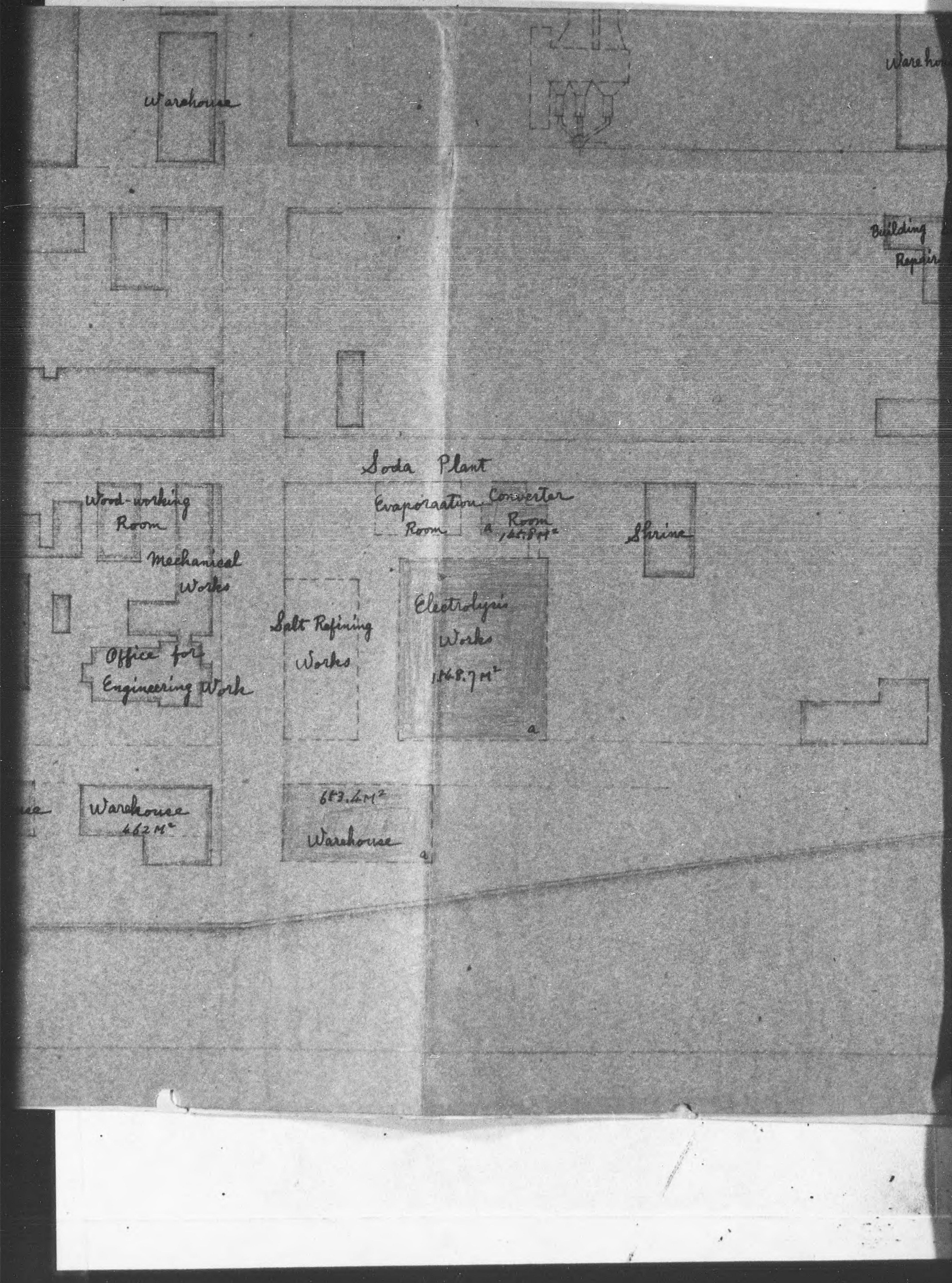


Warehouse

Building and
Repair Office

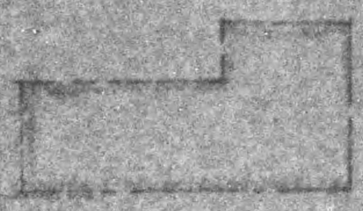
Garage

Warehouse

Dormitory
56 1/4'

Test Room

Warehouse



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