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

Ltr, Hq Toyama Mil Govt Team, APO 713, dtd 18 Oct 46, subject: "Deletion of Plant Code Number".

AG 004 (MI-Em) 3rd Ind. 6 Nov 1946

Headquarters Eighth Army, APO 343.

TO: Commanding General, I Corps, APO 301.

The request contained in paragraph 2 of the 2nd indorsement is approved.

BY COMMAND OF LIEUTENANT GENERAL EICHELBERGER:

R. SCHAFER
Lt Col., AGD
Asst. Adjutant General.

AG 004 - HA 4th Ind EHN/ln

HQ I Corps, APO 301. 9 NOV 1946

TO: CO, Tokai-Hokuriku Mil Govt Region, APO 710

NA22880

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

DATE	SUBJECT	ISSUING HEADQUARTERS & INDORSEMENT
- Jan. 49	Power Plant in Mizuno Area Designated for China.	Hiroshima Finance Bureau, Kure Branch
18 Jan. 49	Drawings Taken Without Consent of the Assistant Custodian.	Hiroshima Finance Bureau, Kure Branch
28 Feb. 49	Erection of Battery Charging Sites - Harima Dock, Kure.	H,M.G.T. Basic
21 July 49	Use of Portion of Reparations Area as Parking Spacefor Municipal Bus.	H.C.A.T. Basic
6 April 50	Repair of Reparation Items.	
30 April 50	Project for Establishing Kure Plant	Nichia Steel Works Ltd,
29 March 51	Report on Progress of Construction of Steel Works in Former Kure Naval Arsenal	Nichia Steels Works Kure Plant
7 April 51	Correction of Inventory Number of Reparation Designated Ship	Chugoku Finance Bureau

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

CHUGOKU FINANCE BUREAU

File Number: CHU ZAI BAI 471 April 7, 1951

Commanding Officer,
Chugoku Civil Affairs Region.

SUBJECT: Correction of Inventory Number of Reparation Designated Ship.

Mistake of the inventory number for the following ship was pointed out by Mr. Stradley, Chugoku Civil Affairs Region, at time of his inspection.

It is hereby reported that correction has been completed as attached picture on 26th of March.

Inventory number: 11-5(5)-3707

Type of ship : Tug-boat

Custodian : Kudamatsu Tekko Zosen Sho. Presently under name of Sanyo Kogyo K.K.

Wrong number formerly painted: 11-5(5)-3706

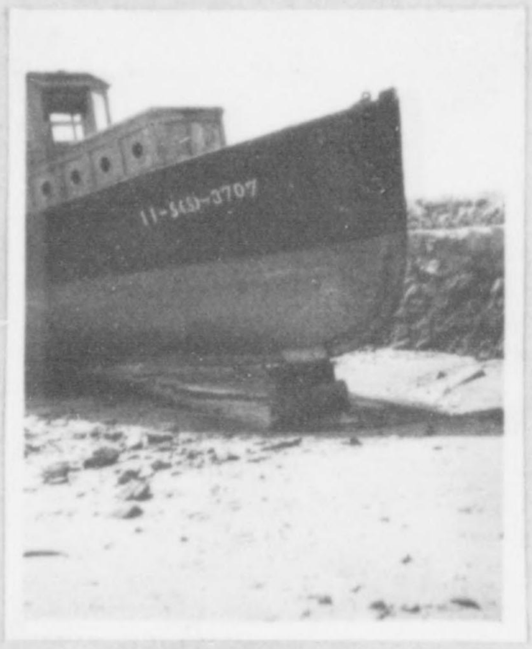
K. Morioka
Kinichiro Morioka
Director

Incl: Picture of subject ship.

TRADE INDUSTRY

File 11-05 ×J VII

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



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

29 March 1951

To : Colonel Keane,
Commanding Officer, Chugoku Civil Affairs Region

From : Nichia Steel Works Kure Plant

Subject: Report on Progress of Construction Of Steel Works in former Kure Naval Arsenal

We hereby express our deepest gratitude for your high consideration to the construction of our steel and rolling plants in the former Kure Naval Arsenal.

Concerning the construction of steel manufacturing plant which is in the top priority in the first project the works are in progress aiming to start the operation of one open hearth on 1 June 1951.

The progress of the construction works is as per attached sheet and we humbly request your further assistance and advice.

H. Isaka

H. ISAKA
Managing Director,
Nichia Steel Works.

Enclosure:

Progress report

11-5(c) Sec VII

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

PROGRESS OF CONSTRUCTION WORKS
NICHIA STEEL WORKS

Reparations Code No.	Name of Machines or buildings	Progress of Works	Remarks
-	Building	50%	Extension of open hearth deck & fortification of buildings
-	Roofing of buildings	100%	Roofing with iron sheet completed.
11-5(6)-2457	Open hearth		
-2459	"		
-2461	"	30%	Old bricks removed
-2462	"		
-2076	Overhead Crane		D.C. electric equipment converted to A.C. & revolution speed raised.
-2077	"		
-1231	"	30%	
-1232	"		
-2081	"		
-2082	"		
-3370	"		
-1234	Boiler	10%	Inside cleaning started.
-1235	"		

END.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 77 5013

Outline of the 3rd additional application for permit of the authorized use of the area in the former Kure Navy Arsenal

Amagasaki, 15th February, 1951. Nichia Steel Works, Ltd.

1. The area and disposition of factories.

As per the separate map.

Additional area applied for ..... 38,915 tubos

Additional buildings area applied for ... 23,241 tubos

Reference:	Land area	Building area
(The 1st Application	84,500 tubos	17,044 tubos
(The 2nd Application	26,800 "	9,713 "
(The 3rd Application	38,915 "	23,241 "
	150,215 "	49,998 "

2. The outline of the plan.

In connection with the proceeding of the plan of establishment of our Kure Mill, it has been found that, from the factory management point of view, in consideration of the under-mentioned facts, as well as the latest situation of demand and supply of steel and also future trend, it seems to be quite insufficient to satisfy the requirements with our 1st and 2nd plan, of which applications for permit has been made. We are, therefore, making the 3rd application on the basis of the plan as shown on the separate map and illustration of order of operation.

(a) Since it has become possible to get a transfer for our use the blooming mill (not working now) of Yahata Steel Works, the blooming mill (now making billets) and bar mill (now making sheet bars) in our Amagasaki Mill will have surplus capacity. By using these mills as specially rolling large and medium shape steels, we can right meet the heavy demand for shape steel (suchas channel, angle, beam, etc.), which are scare in the market. For location of establishing these two mills, the place shown in the separate map and the buildings indicated suit best and we cannot find anywhere to substitute.

(b) As a result of various studies made between Mr. Hacket of Lewis Foundry of America and ourselves on the occasion of his inspection on the spot, it has been pointed out that, in view of scales of equipments of our cold rolled mill and tin plate mill, the buildings under present plan are too small to accomodate. We have no alternative but to apply for authorized use of the buildings in the area indicated in the separate map.

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(a) Since it has become possible to get a transfer for our use the blooming mill (not working now) of Yahata Steel Works, the blooming mill (now making billets) and bar mill (now making sheet bars) in our Amagasaki Mill will have surplus capacity. By using these mills as specially rolling large and medium shape steels, we can right meet the heavy demand for shape steel (suchas channel, angle, beam, etc.), which are scare in the market. For location of establishing these two mills, the place shown in the separate map and the buildings indicated suit best and we cannot find anywhere to substitute.

(b) As a result of various studies made between Mr. Hacket of Lewis Foundry of America and ourselves on the occasion of his inspection on the spot, it has been pointed out that, in view of scales of equipments of our cold rolled mill and tin plate mill, the buildings under present plan are too small to accomodate. We have no alternative but to apply for authorized use of the buildings in the area indicated in the separate map.

(c) Therefore, in addition to the present plan, we plan establishment of large and medium shape rolling mills, open hearth furnace, alteration of place of cold rolled mill and tin plate mill. And for this purpose, we apply for permit of authorized use of area and buildings in our 3rd application.

3. Contents of additional plan.

A. Equipment and capacity.

(a) Additional establishment of open hearth furnace shop. 4 open hearth furnaces.

Shore side of the 3rd open hearth furnace shop under present plan is to be reclaimed and four open hearth furnaces are to be built in addition to the existing ones. Capacity p.a. ..... 200,000 tons.

(b) Large shape mill.

Auxiary equipments in part will be added on the rolling equipments of the present bloom mill in Amagasaki Mill. The mill will become to able to make shape steel upto 200 m/m. Capacity p.a. ..... 90,000 tons.

(c) Medium shape mill.

Present medium shape rolling equipments in Amagasaki Mill will be removed to Kure and produce shape steel upto 100 m/m.
Capacity p.a. ..... 75,000 tons.

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(d) Blooming mill.

Since it is, as already mentioned, now settled to get the transfer of blooming equipments in Yahata Steel Mill, present blooming mill and bar mill in our Amagasaki Mill, which had been intended to blooming purpose, now can be used for specially rolling large and medium shape steel respectively.

(e) Cold rolled and tin plate mill.

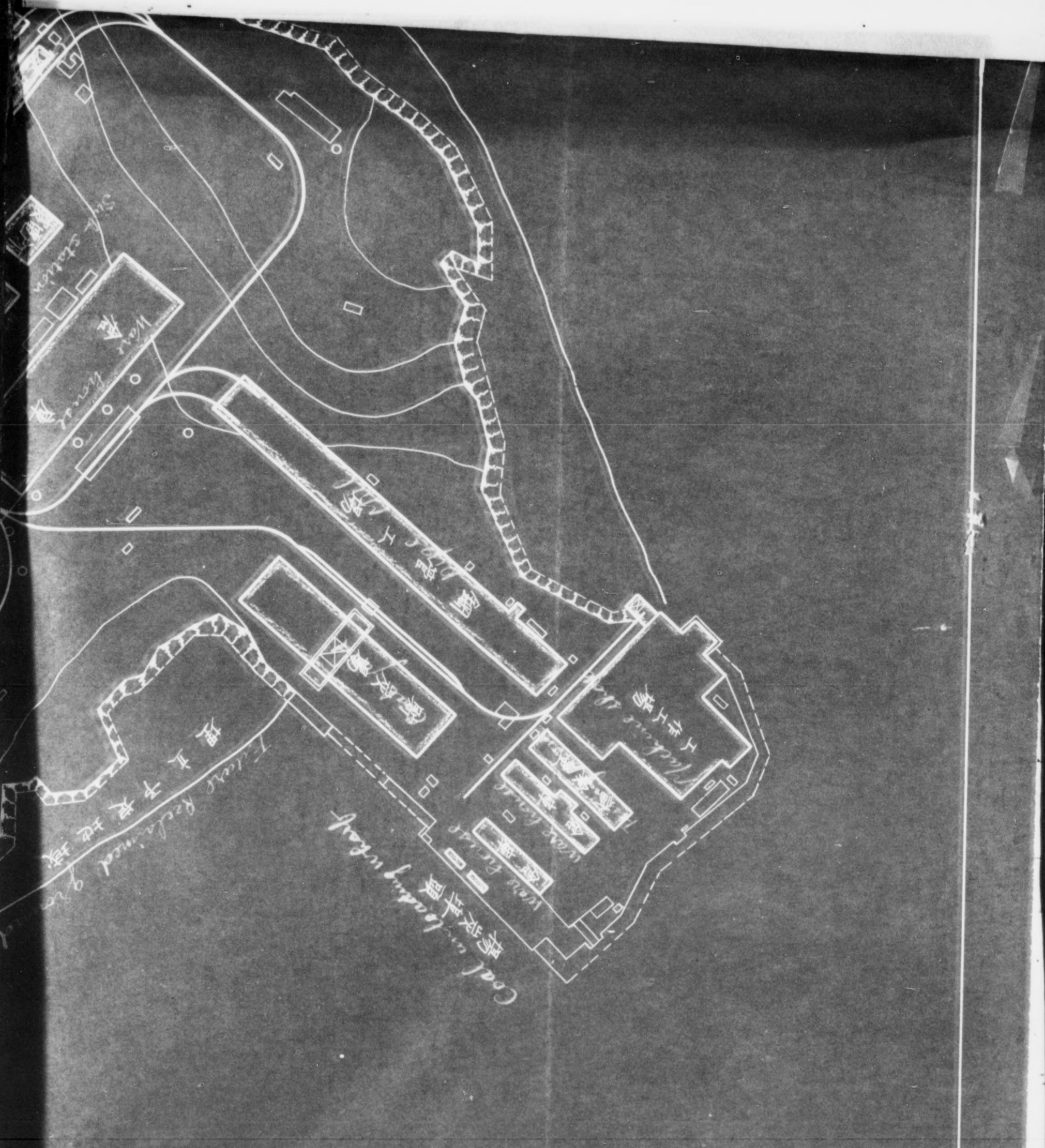
No change in the existing plan.

B. Balance in demand and supply of ingot and billet. (Unit ton p.a.)

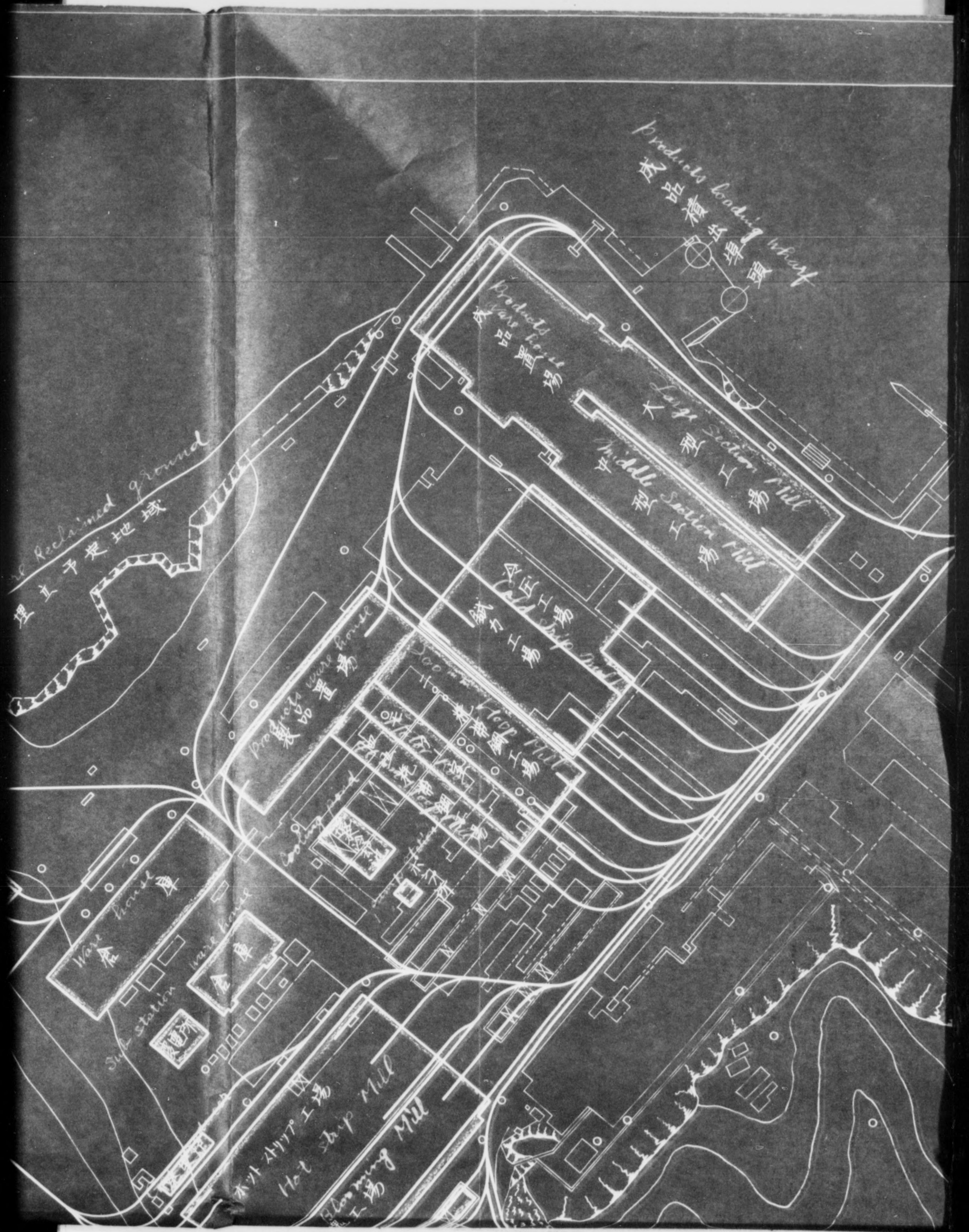
Mill	Turn-over	Billet required	Ingot required	Steel Shop	
Wide Width Strip Mill (Cold rolled and tin plate mill)	150 (100)	166	195	total 283.7 Amagasaki Open hearth furnace	3 sets
45 m/m Strip Mill	16	17.8	19.7	The 3rd Steel Mill Open hearth furnace	4 sets
200 m/m Strip Mill	56	62	69		
Large Shape Mill	90	100	111	total 204 Additional Open hearth furnace at shore side of the 3rd Steel Mill	4 sets
Medium Shape Mill	75	83.5	93		
Total	387	429.3	487.7		

plate mill)	(100)					
45 m/m Strip Mill	16	17.8	19.7	total 283.7	The 3rd Steel Mill Open hearth furnace	3 sets
200 m/m Strip Mill	56	62	69			4 sets
Large Shape Mill	90	100	111	total 204	Additional Open hearth furnace at shore side of the 3rd Steel Mill	4 sets
Medium Shape Mill	75	83.5	93			
Total	387	429.3	487.7			

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 77 5013


Coal Loading Wharf
Ferry Boat Slip
Ferry Boat Slip
Ferry Boat Slip

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



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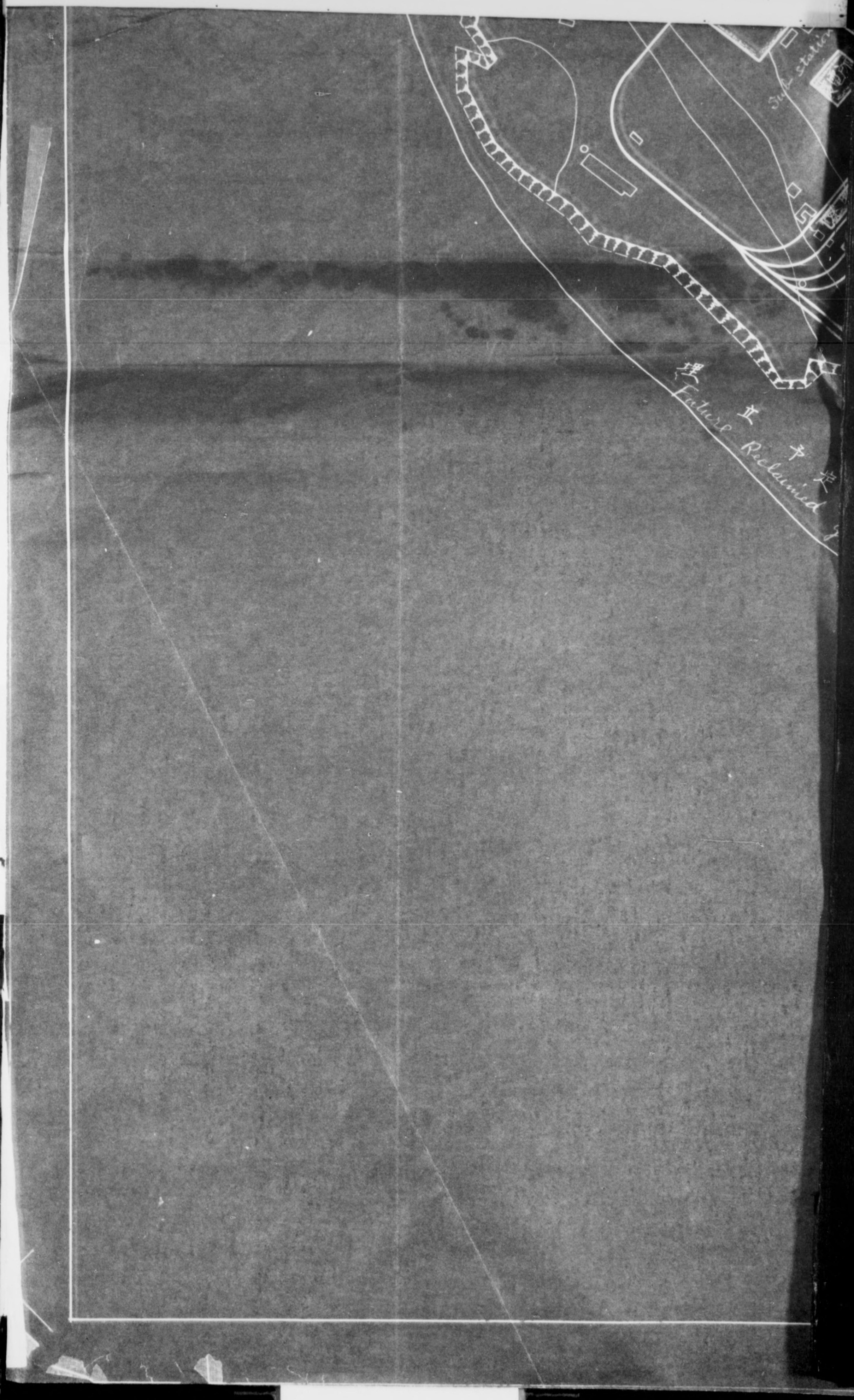

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General Arra

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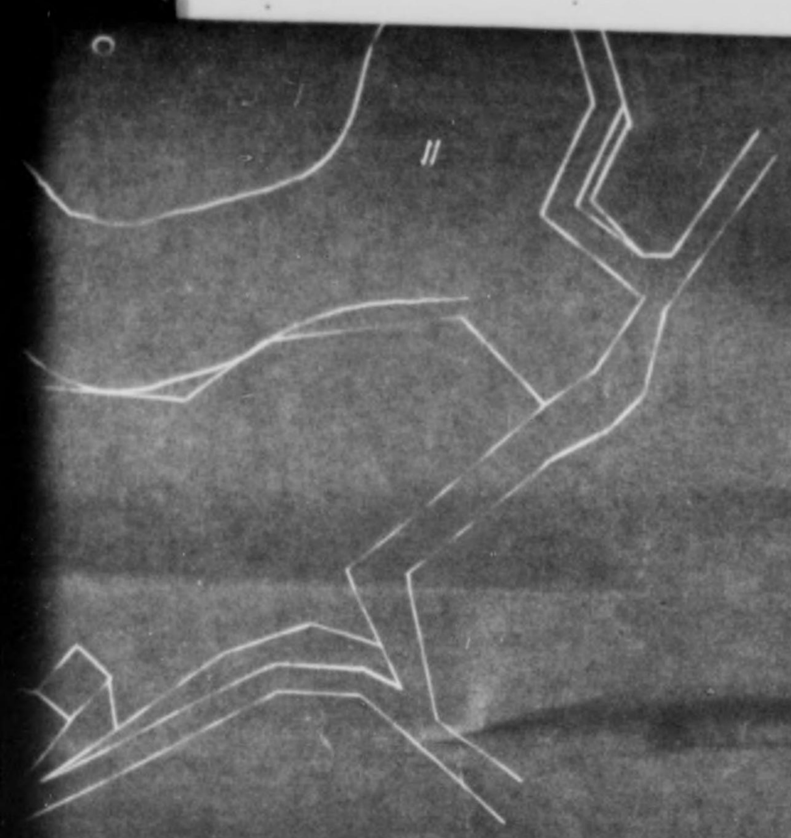

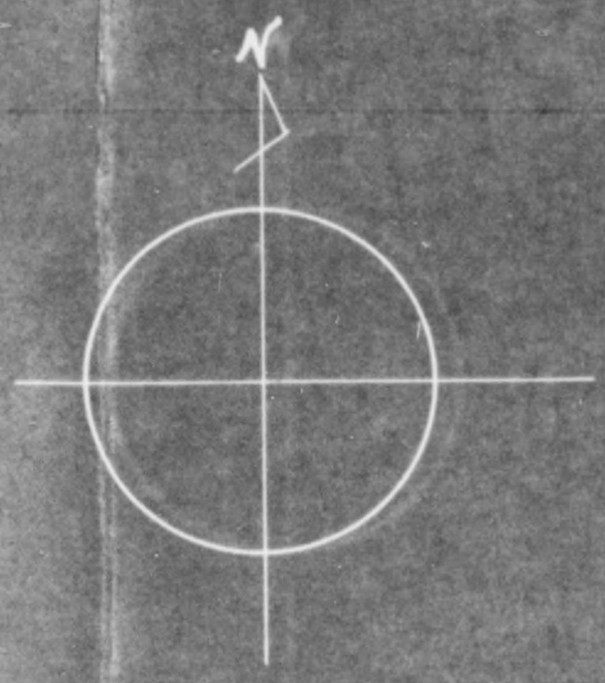

eral Arrangement of Kure steel plant

		日亞製鋼株
	樂	呉工場
		工場配置
	如	圖寫 △△ 申葉
		製圖 池之上 完成
	無	檢圖 杭山 圖面
		課長 吉吠 B K
	錄	部長

50 100 150 200 250 300

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

N

...pement of Kure steel plant

		日亞製鋼株式會社	
		呉工場	
		工場配置計画圖	
寫圖	△△	葉中	縮尺 1/3000
製圖	池之上	完成	昭和26年2月16日
檢圖	杭山	圖面番號	
課長	古吠	BK00-41	
部長			

200 250 300

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

ECONOMICS
CHIEF
D.&I.
N.R.
LABOR
FILE 1
Plant File

PROJECT FOR ESTABLISHING KURE PLANT

30th April, 1950.

THE NICHIA STEEL WORKS, LTD.

MANUFACTURING INDUSTRY FILE 17-5

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

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(2) Site of plant
(3) Steel manufacturing plant
(4) Hoop steel cold rolling and hoop tin-plate manufacturing equipment
(5) Installation of baling hoop steel rolling equipment
(6) Installation of rolling equipment for shape steel, hoop steel, strip steel, and billet

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I. Foreword

The Nichia Steel Works was founded in March 1918, some thirty years ago. Its principal products include Steel Ingots, Steel Billets, Sheet Bars, Hoop Steel, Iron Wire, Galvanized Iron Sheet, etc., and it is also engaged in the sale and manufacture of Steel Conduits, Cold-Rolled Steel, Barbed Wire, Steel Balls, Nails, Rivets, and other diverse iron products. Especially as a manufacturer of hoop steel, it has won nationwide fame and is now one of the three biggest hoop manufacturing companies.

The hoop steel manufactured by the Nichia Steel Works has no equal in quality, shape, and variety in size ranging from 19 to 200 m.m. in width. However, to meet the expected growing demand from various quarters for broader one and at the same time for the purpose of achieving the independence and rationalization of the steel industry of this country, we have planned the establishment of a plant with up-to-date equipment in the Kure area (in the compound of the former Navy arsenal). In this design, the establishment of equipment for rolling of broader hoop (Width: 100 m.m. - ~~400~~ 600 m.m. Thickness: 1 m.m. - 5 m.m.) cold rolling, and manufacturing of tin-plate hoop as well as the removal of the existing equipment (equipment for rolling of billets, middle-sized shape steel, and hoop) of the Amagasaki Plant of the Nichia Steel Works.

II. Principle of Plan

The location of the said former Navy Arsenal is most suitable for the plan for the reasons mentioned below. We planned to lease part of the idle buildings in the arsenal, and complete the plan in four years. The term of the installation work shall be divided into three periods: the 1st period for installing strip steel rolling equipment, the 2nd period for installing strip steel rolling and tin-plate manufacturing equipment, and the 3rd period for repairing existing idle steel manufacturing equipment as well as the removal of the equipment for rolling of billets, middlesized shape steel and hoop steel now installed in the Amagasaki Plant.

Each equipment shall be operated when it has been completed, without waiting for the completion of the whole equipment.

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III. Details of Plan

1. Capacity of planned equipment

The planned equipment shall have the under-mentioned capacity.

Division of term	Equipment	Existing	To be installed	Capacity (per annum) (Tons)	Products: Type	Products: Standard: Width	Products: Standard: Thickness
1st.	Strip steel rolling equipment	Building Machinery		150,000	Strip steel	150m.m.- ~~400~~ 600 "	1m.m.- 5 "
2nd.	Strip steel cold rolling equipment	"	"	100,000	Cold rolled hoop steel	150m.m.- ~~400~~ 600 "	1m.m.- 3 "
	Strip tin-plate manufacturing equipment	"	"	50,000	Strip tin-plate	150m.m.- ~~400~~ 600 "	1m.m.- 1.2 "
3rd.	Steel manufacturing equipment	Open hearth furnace (to be repaired)					
		Electric furnace (to be installed)		220,000	Ingots Various types		
	Billet rolling equipment	Building Machinery (to be installed)		250,000	Billets Various types		
	Hoop steel rolling equipment	Building Machinery (to be installed)		70,000	Hoop steel	50m.m.- 200 "	0.9m.m.- 3.8 "
	Baling hoop steel rolling equipment	"	"	20,000	Baling hoop steel	19m.m.- 50 "	0.9m.m.- 3.0 "
	Middle-sizes shape steel rolling equipment	"	"	120,000	Sheet bar Middle-sized steel Various types		

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2. Term of construction and starting of production:

The construction shall be started at the beginning of the 1950 fiscal year and completed in four years. The term shall be divided into the three following periods.

Division of term	Equipment	Construction term	Starting of production
1 st	Strip steel rolling equipment	From June '50 To Nov. '51	Dec. '51
2 nd	Strip steel cold rolling equipment	From Oct. '51 To Mar. '53	Apr. '53
	Strip tin-plate manufacturing equipment		
3 rd	Steel manufacturing equipment, Billet rolling equipment, Middle-sized shape steel rolling equipment	From Oct. '52 To Mar. '54	Apr. '54
	Hoop steel rolling equipment, Baling hoop steel rolling equipment.		

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3. Fund for Construction and how to raise it:

The fund needed will total 1,755,250,000 yen, which is itemized as follows.

Division of term	Equipment	Fund needed	Foreign currency needed (included in Fund needed)	How to raise
1st	Strip steel rolling equipment	699,000	250,000	U.S. Aid Counterpart fund: 400,000 Loans & others: 299,000
2nd	Strip steel cold rolling equipment	233,000	120,000	U.S. Aid Counterpart fund: 400,000 Loans & others: 189,000
	Strip tin-plate manufacturing equipment	337,000	230,000	
	Auxiliary facilities	19,000	-	
	(Sub-total)	589,000	350,000	
3rd	Steel manufacturing equipment	117,250	-	
	Billet rolling equipment	189,000	-	
	Middle-sized shape steel rolling equipment	55,000	-	
	Hoop steel rolling equipment	44,800	-	Loans & others: 467,250
	Auxiliary facilities	33,000	-	
	(Sub-total)	467,250	-	
Total		1,755,250	600,000	U.S. Aid Counterpart fund: 800,000 Loans & others: 955,250

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Required funds divided by fiscal years are shown below:

Fiscal year	Funds required (In 1,000 yen)	Foreign money (In 1,000 yen)	Counterpart funds (In 1,000 yen)
1950	465,000	250,000	400,000
1951	475,000	120,000	400,000
1952	437,000	230,000	
1953	378,250	-	
Total	1,755,250	600,000	800,000

IV. Why was the Plan Originated?

1. Future of Hoop Steel Industry

The following are the characteristics of hoop steel:

a. Any desirable size, both in width and thickness, of hoop can be manufactured, while the size of steel plate or sheet is unalterable.

b. The size of hoop steel is precisely uniform.

c. Hoop Steel is in the form of coil, suitable for continual processing, from 30 to 200 meters in length.

d. Hoop Steel is excellent in quality.

Hoop steel is one of the comparatively new steel products. The Nichia Steel Works initiated the industry in 1935. Hoop steel soon found wider uses by reason of the abovementioned characteristics, and the total output of hoop steel throughout this country exceeded 100,000 tons. In Japan at present Hoop steel is used for welded steel pipes, bicycle parts, baling materials, and other processing purposes, and it is expected that Hoop steel will find far wider uses as materials for electric welded pipes, tin-plate hoop, silicon hoop steel, automobile parts, vehicle rims, various machine parts and other processing purposes, especially demand for hoop of wider width will exhibit a remarkable increase.

2. Present State of domestic Hoop Steel Industry

At present the steel works of the following companies are leading hoop steel manufacturing plants in Japan:
The Fuji Iron Mfg. Co., the Tokuyama Iron Sheet Mfg. Co., and the Nichia Steel Works. These steel works produce hoop steel of the following size.

Fuji	80 m.m.	--	160 m.m.	in width
Tokuyama	50 "	--	140 "	"
Nichia	19 "	--	200 "	"

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This shows that 19m.m. - 50m.m. and 160m.m. - 200m.m. hoop steel are produced by the Nichia Steel Works exclusively.

Besides the Nichia Steel Works, the Tobata Strip Steel Works manufactures strip steel of a width of 750 - 800m.m.

As mentioned above, at present this country has no steel works producing hoop steel with a width of 200m.m. - 400m.m. It is said that there has been a keen demand for such broad hoop steel and that a remarkable increase in the demand is anticipated in consideration of the progress of hoop steel industry in the United States.

3. Main Use of Hoop Steel and Cold Rolled Hoop Steel

a. Hoop Steel as material for steel pipes

Of late in the manufacture of steel pipes there is seen a gradual shift to the electric welding process, as pipes welded electrically are excellent in quality and precisely uniform, and economizing manufacturing cost has caused reduction in price. In the United States, the electric welding process has been adopted for the manufacture of general standard-size steel pipes, oil-welling pipes, water-welling pipes, ammonia pipes, pressure pipes, boiler pipes, etc., and reportedly 70 or 60 percent of steel pipes in the United States are manufactured by this process.

In Japan at present the Sanki Mfg. Company and the Tokyo Conduit Company produce steel pipes by this process. Both the companies' products, which are manufactured of hoop steel produced by the Nichia Steel Works, are now winning wide popularity, and there is a remarkably increasing demand for them. We hear that several other companies are now planning the manufacture of electric welded pipes and the output will become much greater in future.

At present hoop steel wider than 200m.m. in needed as material for steel pipes with a diameter of 2 inches, and pipe manufacturers are now using strip steel manufactured in the Tobata Plant of the Yawata Steel Manufacturing Company as the only material for those pipes, cutting it into suitable sizes. But from the technical point of view, it is desirable to use hoop steel of suitable size without processing. Accordingly, hoop steel of a width of 200m.m. - ~~400~~ 450m.m. and a thickness of 1m.m. -- 6m.m. is most suitable as materials for steel pipes with a diameter of shorter than 4.5 inches and demand for hoop steel of such sizes will become more active in future.

b. As material for tin-plate

Can manufacturing is one of the most prospective industries in Japan. And the use of automatic can manufacturing machines together with tin-plate hoop as materials would cause a decided increase in manufacturing efficiency. As to the size of such hoop steel, the maximum must be ~~400~~ 600m.m. in width in consideration of the manufacture of 18 liter petroleum cans.

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Tin-plate hoop is used for parts of spinning or weaving machines, automobile parts, meters, medical appliances, and other processing purpose, accordingly, it is possible to whip up demand for hoop tin-plate in various lines.

The Nichia Steel Works, importing apparatus for manufacturing hoop tin-plate from Germany in 1938 (It has obtained the patent right as well.), had been engaged in manufacturing hoop tin-plate by the electro-plating process until it was suspended on account of the stoppage of importation of tin due to the China Incident and for some other reasons. In Japan at present the Takasago Steel Works is the only mill manufacturing hoop tin-plate by the electroplating process, and the hoop tin-plate is narrower than 180m.m. and its producing capacity is not very high. The hoop tin-plate which the Nichia Steel Works plants to manufacture is one with a width of from 100 to 400m.m. manufactured by the electroplating process, and in producing capacity the works exceeds all other steel works throughout the country.

c. Hoop Steel for other general purposes

At present steel plates and sheets as well as high grade steel sheets are used as materials for automobile parts, silicon steel, various machines, and other processing purposes. Needless to say, hoop steel would be most suitable for these uses, and there will be considerable demand for hoop steel, especially for one with a width of 200m.m. - ~~400~~ 600m.m., which is the medium between strip steel (750 m.m. - 800m.m.) and band steel now sold in market (narrower than 200m.m.)

4. Anticipated demand for hoop steel, especially for Strip steel (200m.m. -- ~~400~~ 600m.m.), hoop tin-plate, and others.

The annual output of ordinary steel in this country is 2,500,000 tons at present. However, in consideration of the promotion of foreign trade, the development of international relation and economic reconstruction of East-Asiatic countries, the annual demand for hoop steel broader especially for one (200m.m. - ~~400~~ 600m.m.), after several years is estimated as follows:

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Type of article	Present annual demand: Total demand	Present annual demand: Demand for broader steel hoop (200m.m. ~~-400~~ 600 m.m.)	Expected annual demand: Total demand	Expected annual demand: Demand for broader steel hoop (200m.m. ~~-400~~ 600 m.m.)
Steel plate	120,000	40,000	240,000	80,000
Steel sheet (0.7-3.0)	225,000	60,000	420,000	120,000
Tin-plate	50,000	30,000	150,000	90,000
Cold rolled steel sheet	18,000	8,000	50,000	30,000
Pipes (1"-2")	55,000	-	100,000	-
" (2"-6") Boiler pipes Pipes for General purpose	123,000	40,000	240,000	80,000
Hoop Steel (19-200)	100,000	-	200,000	-
Strip steel (200-~~400~~ 600)		(175,000)		(400,000)
Total	691,000	175,000	1,400,000	400,000

This shows that in future about 400,000 tons of strip steel will be needed, including 200,000 tons for sheet steel, 90,000 tons for tin-plate hoop, 30,000 tons for cold rolled strip steel, and 80,000 tons for steel pipes.

5. How much will this plan contribute to rationalization of steel industry?

Since the termination of the war European countries have made rapid and brilliant progress in the technique and equipment of steel industry while Japan has remained without any remarkable improvement in techniques and others, especially in equipment. The aim of this plan is to make up for these handicaps, adopting the continuous electroplating process using the new continuous broader hoop steel rollers and the cold hoop steel rollers. When the existing equipment is moved to the new plant, over-all reform will be effected in the industrial facilities of the Works, with these equipment and technics radically improved.

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As a result, as mentioned below, producing cost will considerably reduced, partly due to the location of the Kure Naval Arsenal which is very suitable for the plan, and assuredly it will add much to the rationalization and independence of our industry, enabling our products to compete in the arena of the international trade.

6. Necessity of manufacture of broader hoop steel by our company.

The manufacture of hoop steel is really a difficult work and requires many years' experience, excellent technique and the through study and research of technique and manufacture of steel billets and ingots to be used for the purpose.

The Nichia Steel Works has now made its name in this line. This is due to its many years' experience and strenuous and unremitting efforts for the manufacture of hoop steel since its establishment of band steel mill, and its excellent technique of manufacturing hoop steel as well as ingots and billets to be used for the purpose. We firmly believe, therefore, that the Nichia Steel Works is best qualified for the manufacture of such hoop steel.

Upon the completion of the strip steel rolling equipment, the strip steel cold rolling equipment will be installed. This is the necessary development of our plan for the installment of the reverse four high cold rolling equipment in our Kanzaki Plant, the construction of which was started last year. The manufacture of hoop tinplate is also the development of our experience in the manufacture of the German electroplating process, which was adopted by our works in 1938.

The removal of the billet, middle-size shape steel, and hoop steel rolling equipment in our Amagasaki Plant has been necessitated by the sinking of the ground in Amagasaki and its vicinity. The ground has sunk down about two meters during the past fifteen years, and we have spent considerable amount of money in repairing the equipment. Especially the probable danger at the time of flood-tide threatens the continuance of the enterprise. Thus the removal is absolutely necessary for the maintenance of the enterprise and at the same time the equipment will radically be improved on the occasion of the removal. The reconstruction of the existing idle equipment for manufacturing steel in the Kure Arsenal aims at the secure procurement of steel materials to be used for our present plan.

V. Location and Conveniences for the present purpose.

1. Location

We have planned to lease a part of the former Navy arsenal at Kure, Hiroshima Ken. The site extends over 84,500 tsubo and the aggregate dimension of the buildings to be utilized is about 16,310 tsubo.

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2. Conveniences for the present purpose.

The arsenal has open furnaces and buildings suitable for this purpose, which can be utilized as they are. Furthermore, it is furnished with suxiliary equipment such as harbor, transportation, power, water supply, and other various facilities. Besides, the place is conveniently located for the supply of labor and the development of its vicinity is certain, while the people in the vicinity are very favorable to the establishment of the plant.

The conveniences are detailed as follows:

(1) Harbor

The harbor and its annexed facilities are peerlessly convenient and well located for the purpose. The location is perfectly suitable as the base for the development of our steel industry in the world market.

(2) The transportation by lighter or motor-sailer is available.

Loading and unloading directly from major freight vessels of 10,000 tons is also possible. The harbor is well qualified for the embarkation of liners for foreign countries. Transportation in the compound of the plant shall be carried out by spurs as well as by trucks. For transportation between the plant and other places outside railways and trucks are available.

The distance between the plant and major cities in this country are shown below.

Name of City	Sea Transportation	Land Transportation
Fukuoka	300 (km)	310 (km)
Takamatsu	160 "	-
Osaka	300 "	370 "
Nagoya	650 "	570 "
Tokyo	900 "	920 "
Hiroshima		70 "

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(3) Electric power:

The power transmitting facility and transformer substation which enabled this plant at the time of war to carry on full operation remain intact and available. The transformer substation has a capacity of 80,000 K.V.A. as against 16,000 KW. which our projected plant requires at ordinary times after completion of all this plan. Therefore, even if further demand for electric power is taken into consideration, the present capacity is quite sufficient.

(4) Water supply:

Kure City has a capacity to supply 50,000 tons water a day, 25,000 tons of which are the maximum amount of demand by the citizen. This indicates that the balance of 25,000 tons are left available. The total demand of water after completion of the project is 35,000 tons (including reuse of water), of which new supply of water is expected to be 20,000 tons per day, therefore, the present water supplying capacity is sufficient to meet our demand.

(5) Labor power:

Labor resources in Kure City are abundant and include a good number of skilled workers in the metal industry. The unemployment in the city is estimated at 30,000 approximately, one of the greatest figures that the cities of Japan show. For this reason, the labor cost per capital in Kure City is 7,000 or 8,000 yen a month as against some 10,000 yen a month in the Osaka-Kobe district .

(6) Circumstances:

Various quarters in Hiroshima Prefecture including Kure City show a strong eagerness to invite the heavy industry. Therefore, it is expected that we will be offered much convenience in the construction and further development of our plant.

(7) Possibility of future development:

Throughout the district, there remain a number of facilities of the ex-Navy arsenal. In line with improvement of harbor facilities, it will offer wider scope for development to the heavy industry including shipping and machine industries. This prospect is quite favorable to us, as it will place us on a beneficial base of mutual dependence.

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VI. Outline of Project and Construction Cost (ref. Attached Sheets for Details)

1st-period Plan:

1. Strip steel rolling equipment (to be newly established)
   (A) Production capacity ----- 150,000 tons (per annum)
   (B) Product ----- Strip steel (Width: 150-~~400~~ 600 m/m) (Thickness: 1.0-5.0 m/m)
   (C) Raw material ----- Steel billet 150-375 m/m(Width), 90 m/m(Hight) 1,850-3,700 m/m(Length)

2. Main Equipment

Item	Type,Capacity,etc.	Number	Cost of Construction (Unit: 1,000 yen)	Remarks
(1) Building	1,770 tsubo	-	5,000	To be established
(2) Gas producer		3	20,000	"
(3) Re-heating furnace	Continuous gravity fall	2	10,000	"
(4) Rolling equipment	Quadruple continuous	-	556,000 (Foreign currency 250,000 included)	"
(5) Power equipment	Motor,etc.	-	80,000	"
(6) Auxiliary facilities	Repair-shop etc.	-	28,000	Partly to be leased, partly to be purchased
Total	----------		699,000	

2nd-period Plan:

1. Strip Steel Cold Rolling Equipment (to be newly established)
   (A) Production capacity ----- 100,000 tons (per annum)
   (B) Product ----- Cold rolled strip steel (Width: 150-~~400~~ 600 m/m) (Thickness: 0.1-3.0 m/m)
   (C) Raw material Strip steel (Width: 150-~~400~~ 600 m/m) (Thickness: 1.0-5.0 m/m)
   (D) Main equipment

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Item	Type, Capacity, etc.	Number	Cost of Construction (Unit: 1,000 yen)	Remarks
(1) Building	1,150 tsubo		3,000	To be leased and repaired.
(2) Cold rolling equipment	Quadruple continuous		185,000 (Foreign currency 120,000 included)	To be newly established.
(3) Power equipment	Motor, etc.		45,000	To be newly established.
		Sub-total --------	233,000	

2. Strip tin-plate rolling equipment (to be newly established)
   (A) Production capacity — 50,000 tons per annum
   (B) Product — Strip tin-plate (Width: 150-~~400~~ 600 m/m) (Thickness: 0.1-1.2 m/m)
   (C) Raw material — Cold rolled strip steel (Width: 150-~~400~~ 600 m/m) (Thickness: 0.1-3.0 m/m)
   (D) Main equipment

Item	Type, Capacity, etc.	Number	Cost of Construction (Unit: 1,000 yen)	Remarks
(1) Building	1,100 tsubo		2,000	To be leased and repaired.
(2) Plating equipment			315,000 (Foreign currency 230,000 included)	To be newly established.
(3) Power equipment	Motor, etc.		20,000	
		Sub-total -------	337,000	

3. Auxiliary equipment attached to 1 and 2.

	¥ 19,000,000
Total ------	¥ 589,000,000

3rd-period Plan:

1. Steel manufacturing equipment (Idle facilities of the former Kure Navy arsenal are to be repaired and utilized)

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(A) Production capacity — 220,000 tons per annum (20,000 tons electric furnace included)

(B) Product

(C) Main equipment

Item	Type, Capacity, etc.	Number	Cost of Construction (Unit: 1,000 yen)	Remarks
(1) Building	2,160 tsubo		1,350	To be leased and repaired
(2) Gas producer		10	6,500	"
(3) Open hearth furnace	50 tons, fixed	4	86,900	"
(4) Electric furnace		3	500	To be transposed
(5) Ingot casting equipment			16,000	"
(6) Waste heat boiler		4	6,000	"
Sub-total	------		117,250	

2. Billet rolling equipment (to be transposed & improved)

(A) Production capacity — 250,000 tons per annum

(B) Product — Steel billet

(C) Main equipment

Item	Type, Capacity, etc.	Number	Cost of Construction (Unit: 1,000 yen)	Remarks
(1) Building	1,770 tsubo	-	1,000	To be leased and repaired.
(2) Gas producer		5	33,000	To be transposed and repaired.
(3) Heating furnace	(Double row)	3	35,000	To be newly established.
(4) Rolling equipment			114,500	To be transposed improved.

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Item	Type, Capacity, etc.	Number	Cost of Construction (Unit: 1,000 yen)	Remarks
(5) Power equipment	Motor, etc.		5,500	To be transposed to increase power
Sub-total	---------		189,000	

3. Medium-size shape steel equipment (to be transposed)

(A) Production capacity — 120,000 tons per annum

(B) Product — Sheet bar, medium-size shape steel

(C) Main equipment

Item	Type, Capacity, etc.	Number	Cost of Construction (Unit: 1,000 yen)	Remarks
(1) Building	1,770 tsubo			To be leased.
(2) Re-heating furnace				
(3) Rolling equipment			55,000	To be transposed.
(4) Electric power equipment				
Total	----------		55,000	

4. Hoop steel equipment (to be transposed)

(A) Production capacity — 70,000 tons per annum

(B) Product — Hoop steel (Width: 50-200 m/m) (Thickness: 0.9-3.8 m/m)

(C) Raw materials to be used — Steel billets

(D) Main equipment

Item	Type, Capacity, etc.	Number	Cost of Construction (Unit: 1,000 yen)	Remarks
(1) Building	1,770 tsubo			To be leased.
(2) Heating furnace		1		To be transposed
(3) Rolling equipment			44,800	"
(4) Power equipment				"
Total	----------		44,800	

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5. Baling hoop steel rolling equipment (to be transposed)

(A) Production capacity — 20,000 tons per annum
(B) Product — Narrow width hoop steel (Width: 19-50 m/m) (Thickness: 0.9-3.0 m/m)
(C) Raw materials to be used — Steel billets
(D) Main equipment

Item	Type, Capacity, etc.	Number	Cost of Construction (Unit: 1,000 yen)	Remarks
(1) Building	700 tsubo			To be leased.
(2) Re-heating furnace		1	28,200	To be transposed.
(3) Rolling equipment				
(4) Power Equipment				
Total	----------		28,200	

6. Auxiliary equipment attached to the equipment mentioned in I --- V :

¥ 33,000,000 — To be leased, after making repair

Grand total ¥ 467,250,000

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VII. Demand and supply of raw materials

Demand and supply of raw materials after completion of each program-period is as follows (Unit: ton):

1. After completion of the first program-period:

Plant	Type of article	Capacity per annum	Estimated production per annum	Demand & Supply of billets	Demand & supply of ingots
Raw materials consuming plant					
Head office affiliated plants	Medium-size Shape steel & Sheet bar,	117,000	30,000	-	33,000
	Baling hoop steel,	18,000	6,000	6,700	7,400
	Broad rolled hoop steel	72,000	35,000	39,000	44,000
Kure plant	Strip steel	150,000	80,000	89,000	99,000
	Total			134,700	183,400
Raw materials supplying plant					
Head office affiliated plants	Steel ingot	153,000 (Electric furnace included)	145,900 (Electric furnace included)		145,900 (Electric furnace included)
		21,000	13,900		13,900
	Steel billet	162,000	101,600	101,600	-
Shortage or over supply		-	-	-33,100	-37,500

This indicates that after completion of the first program-period it is required to purchase 37,500 tons of steel ingots and 33,100 tons of steel billets.

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2. After completion of the second program-period:

Plant	Type of article	Capacity per annum	Estimated production per annum	Demand & Supply of billets	Demand & supply of ingots
Raw materials consuming plant					
Head office affiliated plants	Medium-size Shape steel & Sheet bar,	117,000	30,000	-	33,000
	Baling hoop steel,	18,000	6,000	6,700	7,400
	Broad rolled hoop steel	72,000	35,000	39,000	44,000
Kure plant	Strip steel	150,000	100,000	111,000	123,000
	Cold rolled strip steel	100,000	50,000	-	-
	Strip tin-plate	50,000	30,000	-	-
	Total	-	-	156,700	207,400
Raw materials supplying plant					
Head office affiliated plants	Steel ingots	153,000 (Electric furnace included 21,000)	147,000 (Electric furnace included 15,000)	-	147,000
	Steel billet	162,000	102,000	102,000	-
Shortage or over supply		-	-	-54,700	-60,400

This indicates that after completion of the second program-period it is required to purchase 60,400 tons of steel ingots and 54,700 tons of steel billets.

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3. After completion of the third program-period:

Plant	Type of article	Capacity per annum	Estimated production per annum	Demand & Supply of billets	Demand & supply of ingots
Kure plant	Middle-sized Shape steel & Sheet bar	120,000	Sheet bar 30,000		33,000
			Middle-sized steel 66,000	36,700	36,700 40,800
	Baling hoop steel	20,000	16,000	17,800	19,800
	Hoop steel	70,000	56,000	62,000	69,000
	Strip steel	150,000	120,000	133,000	148,000
	Cold rolled hoop steel	100,000	80,000	-	-
	Strip tin-plate	50,000	40,000	-	-
	Total	-	-	249,500	347,300
Kure plant	Steel ingots	220,000	220,000	-	
		Including electric furnace (20,000)	(20,000)	-	220,000
Amagasaki plant (Attached to Head office)	Steel ingots	132,000	132,000	-	132,000
	Total	352,000	352,000	-	352,000
Kure plant	Steel billets	250,000	250,000	250,000	-
	Surplus and shortage	-	-	(+) 500	(+) 4,700

After the completion of the 3rd period plan, raw materials for manufacturing steel and steel ingots can be produced in our works.

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VIII. Amount of Materials Necessary for Processing (per annum) divided by period.

The amounts of materials necessary for processing divided by period are estimated as follows:

Materials	After completion of 1st period plan (ton)	After completion of 2nd period plan (ton)	After completion of 3rd period plan (ton)
Water New Water	1,200,000	1,800,000	6,690,000
Circulation water	1,200,000	-	6,330,000
Electric power	(Ordinary times) 7,000KW	(Ordinary times) 15,400KW	(Ordinary times) 21,100KW
Coal	8,000	8,240	124,440
Pig iron			73,000
Scrap iron			162,000

IX. Personnel (Details-Attached Sheets)

Division by equipment	Staff	Operatives	Total
Strip steel rolling equipment	30	271	301
Strip steel cold rolling equipment	30	204	234
Strip tin-plate rolling equipment	30	192	222
Steel manufacturing equipment	31	636	667
Billet rolling equipment	25	276	301
Hoop steel rolling equipment	25	240	267
Baling hoop steel	15	197	212
Middle-sized shape steel rolling equipment	25	250	275
(Sub-total)	211	2,266	2,477
Annexed facilities			
Machine processing	30	268	598
Repairing	15	83	98
Electricity	30	326	356
Warehouse	15	186	201
Examination	15	129	144
Laboratory	25	-	25
Heating	20	104	124
Transportation	15	100	115
(Sub-total)	165	1,496	1,661

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Division by equipment	Staff	Operatives	Total
Operation			
General affairs	128	-	188
In Intendance	64	-	64
Operation	160	-	160
(Sub-total)	412	-	412
Total	788	3,762	4,550

X. Production plan and estimated sale price divided by terms

Period	Type of article	Production per annum	Sale amount per annum	Export amount (part of sale amount
1st	Strip steel	80,000	80,000	56,000
2nd	Strip steel	100,000	47,000	33,000
	Cold rolled hoop steel	50,000	19,000	13,000
	Hoop tin-plate	30,000	30,000	24,000
3rd	Steel ingot	220,000	-	-
	Steel billet	250,000	-	-
	Sheet bar middle-sized steel	96,000	96,000	48,000
	Hoop steel	56,000	56,000	28,000
	Baling hoop steel	16,000	16,000	13,000
	Strip steel	120,000	36,000	25,000
	Cold rolled hoop steel	80,000	38,000	27,000
	Hoop tin-plate	40,000	40,000	32,000

Upon the completion of the plan of the first period 80,000 tons of strip steel can be put on market. But when the manufacturing equipment of cold rolled hoop steel and strip tin-plate has been completed the amount of strip steel to be put on market shall gradually be reduced and replaced by cold rolled hoop steel and others.

XI. Production Cost & Estimated Profit & Loss

(1) Production cost (per ton)

The cost of articles to be produced by this plan and put on market and profit to be obtained from their sale are as follow :

Type of article	Q'ty to be produced (ton)	Amount to be sold (ton)	Material cost (yen)	Operation cost (yen)	By product (Sum to be deducted)	General management expenses & business expenses	Total cost	Estimated sale price (yen)	Profit (per ton) (yen)
Strip steel	120,000	36,000	16,160	4,048	-328	1,020	20,900	31,500	10,600
Cold rolled strip steel	80,000	38,000	23,285	16,245	-130	2,110	41,510	55,000	13,490
Strip tin-plate	40,000	40,000	41,602	10,798	-130	2,710	54,980	66,000	11,020
Hoop steel	56,000	56,000	19,163	5,185	-328	1,000	25,020	30,000	4,980
Baling hoop steel	16,000	16,000	21,730	9,968	-328	1,600	32,970	40,000	7,030
Medium size shape steel	96,000	96,000	16,279	4,699	-328	950	21,600	26,000	4,400

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Strip steel	120,000	36,000	16,160	4,048	-328	1,020	20,900	31,500	10,600
Cold rolled strip steel	80,000	38,000	23,285	16,245	-130	2,110	41,510	55,000	13,490
Strip tin-plate	40,000	40,000	41,602	10,798	-130	2,710	54,980	66,000	11,020
Hoop steel	56,000	56,000	19,163	5,185	-328	1,000	25,020	30,000	4,980
Baling hoop steel	16,000	16,000	21,730	9,968	-328	1,600	32,970	40,000	7,030
Medium size shape steel	96,000	96,000	16,279	4,699	-328	950	21,600	26,000	4,400

The production cost shall be reduced by more than around 20% as a result of this rationalization plan, and accordingly, profit per ton shall correspond to 20% of cost.

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(2) Estimated profit and loss (Per annum)

Revenue	
Proceeds of sales	10,680,000,000 (yen)
Expenditure	
Manufacturing cost	8,236,800,000
General management expenses & business expenses	215,000,000
Interest payable	183,000,000
Total	8,634,900,000
Net profit	2,045,100,000

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ATTACHED SHEETS

OUTLINE OF EQUIPMENT TO BE

INSTALLED

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Period	Type of equipment	Type, capacity, etc.	No.	Amount Unit: ¥1,000	Remarks
First period	Strip steel rolling equipment				
	1. Building	1,770 tsubo	1	5,000	To be leased.
	2. Gas producer		3	20,000	To be newly built.
	3. Re-heating furnace	20 T/H	2	10,000	
	4. Billet inserting apparatus		2		
	5. Air warming-up apparatus		2		
	6. Auxiliary billet inserting equipment				
	7. Rolling equipment				
	Roughing roll	Double continuous	4		
	Finishing roll	Quadruple continuous	6	520,000	
	Vertical roll		4		
	Scale removing apparatus				
	Winding m/c This machine is to be under floor winding with automatic external roller drive system.		2		
	Revolving Cutting m/c		1		
	Other auxiliary equipment				
	8. Electric power equipment				
	Main electric motor	A.C. 1,000 KW	4		
		D.C. 1,000 "	5		
		" 550 "	1		
		" 160 "	4	70,000	
	Dynamotor	3,000 KW			
	Other electric motors	800 KW(approx.)			

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Period	Type of equipment	Type, capacity, etc.	No.	Amount: Unit: ¥1,000	Remarks
9.	Machine instalment cost			36,000	
10.	Wiring cost & others			10,000	
11.	Auxiliary equipment				
	Repair-shop				
	Roll-lathe	16 ft.	2		
	Roll-grinder		2		
	Lathe	12 ft., 8 ft., 6 ft.	5		
	Shaper	24 in., 14 in.	2		
	Planer		1		
	Milling m/c		1	14,000	To be leased and partly to be purchased, installing costs included.
	Drilling m/c		2		
	Air hammer		1		
	Compressor		1		
	Others				
	Harbour loading equipment				To be leased
	Railway equipment				
	Locomotive		2		To be leased
	Freight car		10	6,000	and partly to be purchased
	Automobile		1		repairing costs included.
	Motor-truck		1		
	Power receiving and supplying equipment	Transformer, Switch board, Switches.		1,000	To be leased and partly to be purchased.

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Period	Type of equipment	Type, capacity, etc.	No.	Amount: Unit: ¥1,000	Remarks
	Water supply and drainage equipment	Pump for water supply &/or drainage, and water supply tank		2,000	To be leased and partly to be purchased.
	Other miscellaneous equipment			5,000	To be leased.
		Total		699,000	
Second period	A. Strip steel cold rolling equipment				
	1. Building	1,150 tsubo	1	3,000	To be leased(repair needed)
	2. Rolling equipment				
	Cold rolling equipment	Quadruple continuous	5		To be leased.
	Coil-holder		2		"
	Cutting m/c		1		"
	Welding m/c		1		"
	Pinch-roller		2		"
	Winding m/c		2		
	3. Washing tank	Sulphuric acid tank, water tank, oil tank.	1	175,000	To be newly equipped.
	4. Cutting m/c	100 M/M (Trimming)	5		
	5. Electric annealing furnace	Bell-shaped double electric furnace 5-ton			
	6. Seasoning roll	400 M/M	1		
	7. Electric washing machine	200 M/M (double)	1		
	8. Machine instalment costs.			10,000	

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Period	Type of equipment	Type, capacity, etc.	No.	Amount Unit: ¥1,000	Remarks
	9. Power equipment Main electric motor	D.C. 1,000 KW	5	40,000	To be newly equipped.
	Other motors				
	10. Power wiring & others			5,000	"
	11. Crane		2	-	To be leased.
		Total		233,000	
	B. Strip tin-plate manufacturing equipment				
	1. Building	1,100 tsubo	1	2,000	To be leased(repair needed)
	2. Plating equipment				
	Coil-holder		2		
	Pinch-roller		2		
	Cutting m/c		1		
	Plating tester		1		
	Washing tank				
	Brushing m/c				
	Tin-plating m/c			310,000	To be newly equipped.
	Acid washing tank	Chromic acid tank, water tank, lactic acid tank.			
	Conveyer				
	Holden-shear		1		
	Winding m/c		2		
	Piler				
	Machine instalment costs			5,000	

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Period	Type of equipment	Type, capacity, etc.	No.	Amount: Unit: ¥1,000:	Remarks
	3. Power equipment				
	Motor	A.C. 220 KW(approx.)	37	20,000 (installing cost included)	To be newly equipped.
	"	D.C. 150 KW(approx.)	17		
	Switchboard equipment				
	4. Crane		2		To be leased.
		Total of B		337,000	
	C. Auxiliary equipment				
	Repair-shop			8,000	To be leased(Repair needed)
	Power distributing equipment			2,000	"
	Water supplying equipment			3,000	"
	Others			6,000	"
		Total of C		19,000	
		Total of Second Period		589,000	
Third period	A. Steel manufacturing equipment				
	1. Building	2,160 tsubo	1	1,350	To be leased(Repair needed)
	2. Electric furnace equipment	8K, 5K, 3K.	3	500	To be transposed
	3. Gas producer equipment		10	6,500	To be leased(Repair needed)
	4. Equipment for raw materials				
	Crane for raw materials		3		To be leased.
	Scales		4		"
	Others				

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Period	Type of equipment	Type, capacity, etc.	No.	Amount: Unit: ¥1,000	Remarks
5. Open hearth furnace					
	Open hearth furnace	50-ton Fixed	4	80,000	To be leased(Repair needed)
	Inserting crane	5-ton	2	-	"
	Charging box		230	6,900	To be purchased.
6. Casting equipment					
	Crane for tin casting		3	-	To be leased.
	Equipment for tin casting		12	-	"
	Mould	2,000 kg	200	16,000	To be purchased.
	Others				To be leased.
7. Waste heat boiler			4	6,000	To be leased(Repair needed)
8. Coal combustion				-	"
		Total of A		117,250	

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Period	Type of equipment	Type, capacity, etc.	No.	Amount: Unit: ¥1,000	Remarks
B.	Billet rolling equipment				
	1. Building	1,770 tsubo		1,000	To be leased(Repair needed)
	2. Gas producer		3	33,000	Transposition
	3. Heating furnace	Double row	2	35,000	To be newly equipped.
	4. Rolling equipment				
	Roughing roll	Three high rolling mill	1	114,500	To be transposed
	Finishing roll	"	1		"
	Tilting table	For roller			"
	Approach table	With reduction gear for roughing roll			"
	Manipulator	Apparatus for operation			"
	Roller table, etc.				"
	Cutting m/c				To be purchased
	5. Electric power equipment				
	Main electric motor	2,000 HP	1		To be transposed.
	"	1,500 HP	1		To be purchased
	Other motors				To be transposed.
	6. Crane				
	Total of B			189,000	

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Period		Type of equipment	Type, capacity, etc.	No.	Amount: Unit: ¥1,000:	Remarks
Third period	C.	Medium-size shape steel rolling equipment				
		1. Building	1,770 tsubo			To be leased.
		2. Re-heating furnace		2		To be transposed
		Inserting m/c	Double pusher type	2		"
		Billet pusher		1		"
		3. Rolling equipment				
		Roughing roll	Three high	1		"
		Finishing roll	"	3		"
		Tilting table	4,000 x 6,800	4		"
		Manipulator		1		"
		Schlepper		4		
		Kammwaltz	With oil-pump for roller		55,000	"
		Others				"
		4. Equipment for finishing operation				
		Sewing m/c	Cutter-- 1,600 x 6	1		"
		Cutting m/c		1		"
		Rail milling m/c		1		"
		Roll adjusting m/c		1		"
		Others				"
		5. Electric power equipment				
		Main electric motor	2,500 HP	1		"
		Others				To be leased.
		6. Crane		3		"
		Total of C			55,000	

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Period	Type of equipment	Type, capacity, etc.	No.	Amount: Unit: ¥1,000:	Remarks
	D. Hoop steel manufacturing equipment				
	1. Building	1,770 tsubo			To be leased.
	2. Re-heating furnace		1		To be transposed.
	Inserting m/c		2		"
	3. Rolling equipment				
	Two high roughing roll	430 x 1,500 Kammwaltz	1		"
	First roll train	45 x 1,500			
		450 x 1,300	2		"
	Second roll train	330 x 650	3		"
	Third roll train	300 x 600	5		"
	Fourth roll train	340 x 450	2		"
	Vertical roughing roll	460 x 106	1		"
	Finishing roll	350 x 120	1		"
	Continuous finishing roll	Three high semi-continuous	3		"
	Winding m/c		5	44,800	
	4. Equipment of finishing operation				
	Conveyer				"
	Piler				"
	Transporter				"
	Revolving cutting m/c				"
	Others				"
	5. Various motors				"
	6. Crane		4		To be leased.
	Total of D			44,800	

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Period	Type of equipment	Type, capacity, etc.	No.	Amount Unit: ¥1,000	Remarks
	E. Baling hoop steel manufacturing equipment				
	1. Building	700 tsubo			To be leased
	2. Re-heating furnace		1		To be transposed.
	3. Rolling equipment				
	Rough roll	Triple	2		"
	Semi-finishing roll	Double	10		"
	Finishing roll	Three high semi-continuous	4		"
	Rotary shear		1		"
	Cutting m/c	Transport, Adjusting, Hand pusher	13		"
	Winding m/c		3	28,200	
	4. Equipment for finishing operation				
	Transportation facilities				"
	Piler		2		"
	Others				"
	5. Various motors				
	6. Crane		2		To be leased.
		Total of E		28,200	
	F. Auxiliary equipment				
	1. Repair-shop				
	Roll-lathe		10		
	Roll-grinder		2		
	Lathe		15	6,000	To be leased (Partly to be purchased)
	Boring m/c		3		
	Shaper		4		
	Grinder		7		
	Others				

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Period	Type of equipment	Type, capacity, etc.	No.	Amount Unit: ¥1,000	Remarks
	2. Transportation facilities				
	Railway facilities				To be leased (Partly to be purchased)
	Locomotives		3	6,000	
	Freight car		60		
	Others				
	3. Harbor loading facilities			3,000	To be leased (Repair needed)
	4. Electric power facilities	Transformer substation, etc.		13,000	"
	5. Water supplying facilities			2,000	"
	6. Other miscellaneous facilities	Warehouses, office-buildings		3,000	"
		Total of F		33,000	
		Total of Third Period		467,250	

Amount classified by period:

First period	¥	699,000,000
Second period	¥	589,000,000
Third period	¥	467,250,000
Grand Total	¥	1,755,250,000

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Classified by type of work	Number of staff	Gas producer	Re-heating furnace	Rolling	Finishing	Transportation	Per s
First period							
(Semi-strip steel rolling equipment	30	30	36	39	45	76	
Second period							
(Semi-strip steel rolling equipment	30			42		18	
(Semi-strip tin-plate (manufacturing equipment	30				12	33	
Sub-total	60			42	12	51	
Third period							
(Steel manufacturing equipment	31	49				110	
(Ingot rolling equipment	25	19	36	37	60	70	
(Medium-size rolling equipment	25		36	40	50	66	
(Broad rolled hoop steel manufacturing equipment	25		36	47	54	56	
(Narrow rolled hoop (steel manufacturing equipment	15		36	45	57	42	
Sub-total	121		144	169	221	344	
Auxiliary dep't							
Machine process	30						
Building & repair	15						
Electric power	30						
Warehousing	15						
Test	15						
Laboratory	25						
Heating	20						
Transportation	15						
Sub-total	165						
Business dep't							
General affairs	188						
Intendance	64						
Business	160						
Sub-total	412						
Grand Total	788	(98)	(180)	(250)	(278)	(471)	

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Personnel Distribution Table

	Operative											
ini-ning	Trans-portation	Arrang-ing	Washing	Anneal-ing	Plat-ing	Cast-ing	Mater-ials	Brick	Others	Odd jobs	Melting	Su-t
45	76	15								30		
	18		48	42						54		
12	33	24	18		15					90		
12	51	24	66	42	15					144		
	110					133	63	24	32	130	95	
60	70	12								42		
50	66	10								48		
54	56	8								39		
57	42	5								12		
221	344	35				133	63	24	32	271	95	1
(278)	(471)	(74)	(66)	(42)	(15)	(133)	(63)	(24)	(32)	(445)	(95)	

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ribution Table

perative											
ashing	Anneal-ing	Plat-ing	Cast-ing	Mater-ials	Brick	Others	Odd jobs	Melting	Sub-total		Total
								30	271		301
48	42							54	204		234
18		15						90	192		222
66	42	15						144	396		456
			133	63	24	32	130	95	636		667
							42		276		301
							48		250		275
							39		240		265
							12		197		212
			133	63	24	32	271	95	1,599		1,720
									568		598
									83		95
									326		356
									186		201
									129		144
											25
									104		124
									100		115
									1,496		1,661
											188
											64
											160
											412
(66)	(42)	(15)	(133)	(63)	(24)	(32)	(445)	(95)	3,762		4,550

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Statement of Conditions

History &

Present Activities.

NICHIA STEEL WORKS, LTD.

Amagasaki & Osaka

MANUSCRIPT AND INDUSTRIAL FILE
11-5
Sept VIII

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

(1) Growth and historical development. (outlined)

a. Established in March 1918 under the style of Nippon Aento Kabushiki Kaisha, with a view to manufacture and sell Galvanized Steel Sheets.

b. In 1925, licenced by Japanese Government as a Private Bonded Factory, and launched to make a good deal of efforts toward increase in export business.

c. In 1929, started to manufacture Steel Wires, Galvanized Steel Wires, Barbed Wires, Wire Nails, in addition to Galvanized Steel Sheets.

d. In 1935, started to manufacture Hoop Irons.

e. In 1937, constructed Mill of Open Hearth Furnaces and Steel Billets Plant, and thereby started to manufacture Steel Ingots and Steel Billets.

f. In 1941, bought whole Plant of Amagasaki Steel Works of Nippon Soda K. K. and the Company proceeded into the field of manufacturing Special Steel.

g. With a view to make finished hardwares, partly because of controlling over production in Main Works and partly because of utilizing mis-rolled hoops or sheets, or Wires of rejected class, established Branch Factories in Osaka. Fukae Branch Factory was established in 1942, while Fuse and Hiraoka Branch Factories were established in the following year respectively. These branch factories get self-supply of materials from their Main Works and produce so called Third stage steel goods, such as Special Nails, Rivets, Nuts, Wood Screws, Machine Screws, Hinges, Cycle Mudguard, Belt Racing, Wire Netting, etc.

h. With the development of the Company's activities, the capital was gradually increased as shown below:

¥	250,000.00	in 1918 (at the time of establishment)
¥	350,000.00	in 1918
¥	700,000.00	in 1920
¥	1,500,000.00	in 1925
¥	5,000,000.00	in 1937
¥	10,000,000.00	in 1939
¥	17,500,000.00	in 1943
¥	27,500,000.00	in 1945
¥	60,000,000.00	in 1948
¥	120,000,000.00	in December 1949.

i. The name of Company was changed as Nippon Aento Kogyo K. K. in 1935, and the present name was adopted since 1939.

(2) Present activities.

The Company is equipped with Mills to produce from primary steel products to the secondary and third steel products. In other words, Company makes from steel ingot to the various kinds of finished steel goods under one principle of factory operation. The system of Main

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Works and Branch Factories is so organized as to ensure the inherent advantage of self-supply of steel materials from Head to Branches.

The followings are some of the characteristrics of the Company Production of Steel Hoops, which is one of the main products of the Company, had been considered very difficult among Japanese specialiests at large, and left aside of Japanese steel industry. However, the Company initiated this industry as the pioneer in Japan. Although there now exist a few other steel hoop makers in this country, the Company is the only one who can make so wide ranges in width from 19 m/m to 200 m/m. Steel hoops for making Conduit Pipes require a superior quality one. This type of steel hoop, as well as cotton baling hoops for export, are well known as one of the main characteristic products of the Company.

Production of Galvanized Steel Sheets stands on the Company's long years' experience for last thirty years. Amount of yearly production of this Company occupies the greater part of whole amount of production in Japan. Also greater part of whole export amount of Galvanized Sheets from Japan had long been occupied by this Company in pre-war time. After war, the Company supplied these articles in large quantity to Allied Powers under P. D. Export is also being made, first to Philippines and, subsequently, to various parts of overseas countries.

Galvanized Steel Wires, Barbed Wires, Wire Nails were also exported a great deal of quantity in pre-war days, and in post-war, supplied to Allied Powers, as well as Japanese Government. As one of the biggest wire products makers in this Country, the Company has long been widely known and reputed well both abroad and in home market. The Company has already shipped or contracted to ship a fair quantity of Wire products for export.

Production of steel in Open Hearth Furnace kept ceased after the War was finished. However, reopening of this Mill was permitted and began operation from October 1948. With high efficiency and, at the same time, at low cost, this Mill is raising the highest result in steel making circles in this country.

In March 1948, started production of Steel Sheet Bars in the Bar Mill. Out of many sheet Bar makers whose Mills are still closed, or are working at a loss, the Mill of this Company is working to full capacity, raising a moderate result.

Regarding Directorate of the Company, Mr. Tokumatsu Tanaka, President, presides over the Company for last thirty years, while Mr. Hikoji Isaka, Mr. Yoshitomo Uchinami, Managing Directors, work with the Company for last twenty years. All of these people command a long years' experience in steel industry. Mr. Takesaburo Matsubara, Managing Director, who acts as technical director, possesses thirty years' experience in steel making and, as far as open hearth furnace technic is concerned, he is one of the highest authorities in Japan.

(3) Financial status.

The following is the latest Balance Sheet (as of September 30, 1950)

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Balance Sheet
(as of September 30, 1950)

Assets: Items	Value	Capital & Liabilities: Items	Value
Land	21,955,761.29	Capital paid up	120,000,000.00
Buildings and it's attached equipment	387,551,605.63	Legal Reserve	4,400,000.00
Structure	13,204,704.86	Special Reserve	6,000,000.00
Machines and Installations	530,147,443.60	Employees' Retiring allowance fund	5,000,000.00
Transporting Equipment and Instructions	4,160,782.73	Reserve for Dividend	11,200,000.00
Tools and Utensile	18,091,612.14	Reserves made as a rult of revaluation	899,031,708.00
Furniture and Fixture	3,833,960.98	Balance brought forward from the previous term	8,488,448.92
Provisional account for constructions	12,517,910.00	Long-term loans payable	49,180,000.00
Ingot cases and rolls	1,002,925.34	Short-term loans payable	293,300,000.00
Raw materials	340,636,661.12	Notes payable	480,872,671.75
Articles for consumption	51,050,920.60	Notes discounted	112,825,854.66
Semi-finished products	188,221,379.14	Trade account payable	191,444,307.49
Finished products	138,255,259.11	Accrued expenses	64,237,675.33
By-products and Waste	25,450,657.57	Dividends payable	2,880,800.70
Securities	17,895,625.00	Advance payment for sales	95,926,771.12
Deposits	381,063.66	Provisional receipt	44,407,331.27
Trade account receivable	168,507,439.44	Account payable to The Price-adjusting Bureau	137,507.00
Notes receivable	241,965,253.63	Legal reserve for retiring allowance	110,727.11
Incomes to collect	12,833,746.09	Reserve for taxes	5,785,353.00
Account prepaid	125,941,270.13	Profit for the period	52,345,227.81
Expenses prepaid	10,747,775.67		
Fixed deposit	28,000,000.00		
Current account	27,243,439.72		
Post Office transfer deposit	2,666.20		
Cash	16,154,229.64		
Provisional payment	60,465,757.07		
Unexpired insurance premium	1,338,846.15		

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Assets:		Capital & Liabilities:	
Items	Value	Items	Value
Deposit for legal reserve fund for employees' retiring allowance	¥ 15,687.65		
Total	¥2,447,574,384.16	Total	¥2,447,574,384.16

(4) Works and Offices and number of employees.
(as at the end of September 1950)

Names	Location	Land Unit: Tsubo (1 acre 4,046.8)	Buildings Unit: Tsubo (1 acre 4,046.8)	Number of employees
Main Works	1, Tsurumachi Amagasaki City, Hyogo Prefecture.	30,090 Tsubo	16,777 Tsubo	1,715
Osaka Business Office (H.Q.)	Bingo-machi, Higashiku, Osaka.	272 "	337 "	141
Daisan Factory	19, Nakahama-cho Amagasaki City, Hyogo Prefecture.	10,495 "	5,073 "	577
Osaka Factory	43, Dempo-cho, Minami Nichome, Konohanaku, Osaka.	2,495 "	224 "	35
Fuse Factory	16, Takaida Hondori, Nichome, Fuse City, Osaka Prefecture.	1,278 "	592 "	66
Hiraoka Factory	148, Nukada, Hiraoka-cho, Nakakawachi-gun, Osaka Prefecture.	1,667 "	591 "	41
Fukae Factory	22, Sanchome, Fukaehigashi, Higashinariku, Osaka.	1,156 "	591 "	63
Tokyo Office	2-6, Marunouchi, Chiyoda-ku, Tokyo.	0	0	14
Kanzaki Factory	50, Tsugiya Aza Noire, Amagasaki.	7,200	2,200	100
	Total	54,653	26,385	2,752

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(5) Production Capacity (per year) Unit ton.

	Products	
In Main Works	Steel Ingot (Open Hearth Furnace)	100,000
	- do - (Electric Furnace)	21,000
	Steel Billet	85,000
	Broad Steel Hoop	48,000
	Narrow Steel Hoop	30,000
	Sheet Bar	54,000
	Steel Bar	21,600
	Forged Steel	6,000
	Steel Ball	2,400
	Welded Steel Pipe	4,080
In Osaka Factory	Cold Rolled Steel Plate	1,500
In Daisan Factory	Galvanized Steel Sheet	36,000
	Galvanized Steel Wire	28,200
	Wire Nail	8,400
	Barbed Wire	5,000
	Others	3,800
In Fuse Factory	Special Nail	1,212
	Rivet, Bolt, etc.	540
	Special Shaped Wire	240
In Fukae Factory	Iron Wood Screw	192
	Steel Belt Lacing	180
	Bicycle Parts	150
	Steel Hinges	300
In Hiraoka Factory	Nails of Fine Guage	540
	Wires of Finest Guage	1,366
	Wire Netting	36
In Kanzaki Factory	Cold Rolled Steel Hoop	6,000

(6) Amount of Production

Amount of production in recent terms are as follow:

	From: Oct. 1,1949 To : Mar.31.1950		From: Apr. 1,1950 To : Sept.30.1950	
	Quantity (ton)	Amount (unit: thousand yen)	Quantity (ton)	Amount (unit: thousand yen)
Main Factory				
Steel Ingot	49,140	667,859	49,624	758,581
Steel Billet	30,184	522,370	29,432	584,060
(Wide width Steel Strip	15,489	473,477	15,371	472,880
(Narrow width Steel Strip	1,761	69,055	1,138	42,810

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	From: Oct. 1,1949 To : Mar.31,1950		From: Apr. 1,1950 To : Sept.30,1950	
	Quantity (ton)	Amount (unit: thousand yen)	Quantity (ton)	Amount (unit: thousand yen)
(Cold Rolled Steel Hoop (Kanzaki Factory)	877	34,065	1,188	53,097
(Steel Crushing Ball	139	3,527	85	1,913
Steel Bar	179	3,370	73	1,697
Steel Pipes	826	38,911	314	16,676
Sheet Bar	13,312	253,003	11,528	237,164
Total	111,907	2,065,637	108,753	2,168,878
Osaka Factory				
(Cold Rolled Steel Plate	747	21,364	531	15,700
Daisan Factory				
Iron Wire	7,575	181,391	6,921	200,761
Wire Nail	1,536	43,085	1,272	41,597
Galvanized Wire	5,389	174,843	5,025	183,353
Barbed Wire	1,223	47,835	2,308	87,336
(Galvanized Iron Sheet	15,010	282,601	11,765	342,408
Total	30,733	729,755	27,291	855,455
Fuse, Fukae & Hiraoka Factories				
Wire Nail	200	6,058	153	5,364
Galvanized Wire	111	4,983	85	5,046
Iron Wire	985	26,212	956	29,626
Wood Screw	36	2,006	34	5,047
Special Nail	48	1,840	83	2,577
Shoe Tacks	1	37	-	-
Belt Lacing	-	-	-	-
Hinges	99	6,901	107	7,096
Bicycle Mudguard	40	5,356	3	265
Others	247	9,767	255	14,209
Total	1,767	63,160	1,676	69,230
Grand Total	145,154	2,879,916	138,251	3,109,263
Average per a month	24,192	479,986	23,042	518,211

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(7) Profit

	The 62nd Term From: Oct. 1,1949 To : Mar. 31,1950	The 61st Term From: Apr. 1,1950 To : Sept.30,1950
Sales	1,565,908,842.23	1,716,663,844.23
Sundry income	44,614,523.42	18,183,484.62
Total	1,610,523,365.65	1,734,847,328.85
Loss		
Cost of Merchandise Sold	1,406,423,279.03	1,491,024,859.07
Business Expenses	11,121,366.89	7,217,345.36
Cost of supervising and selling	82,401,339.94	66,249,998.53
Interest paid	15,685,374.32	15,606,497.00
Sundry Loss	59,986,678.79	102,403,401.08
Profit in this term	34,905,326.68	52,345,227.81
Total	1,610,523,365.65	1,734,847,328.85
Profit Disposal		
Profit for current term	34,905,326.68	52,345,227.81
Brought forward from previous term	8,433,122.24	8,488,448.92
Total	43,338,448.92	60,833,676.73
Profit disposed of as follows:		
Legal reserve	1,750,000.00	3,000,000.00
Special Reserve	3,000,000.00	5,000,000.00
Reserve for dividend	6,300,000.00	10,800,000.00
Reserve for retire allowance of employees	3,000,000.00	5,000,000.00
Bonus to directors	1,200,000.00	1,500,000.00
Dividend for share holders	6,600,000.00	9,000,000.00
Reserve for tax	13,000,000.00	18,000,000.00
Carried forward to next term	8,488,448.92	8,533,676.73

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(¥) Sales Amount

	The 62nd Term From: Oct. 1,1949 To : Mar.31,1950		The 63rd Term From: Apr. 1,1950 To : Sept.30,1950	
	Quantity (ton)	Amount (unit: thousand yen)	Quantity (ton)	Amount (unit: thousand yen)
Main Works				
Steel Hoop	16,730	520,096	15,503	499,439
Cold Rolled Steel Hoop (Kanzaki Factory)	658	30,619	933	37,267
Mild Steel Bar	322	10,086	534	15,030
Steel Billets	7,569	119,548	8,788	167,814
Special Steel Bar	1	20	-	-
Steel Crushing Ball	212	5,411	35	966
Steel Pipe	382	27,342	235	15,403
Sheet Bar	13,573	270,493	11,944	252,261
Others	-	3,590	4,244	32,231
Total		987,205	42,216	1,020,411
Osaka Factory				
Cold Rolled Steel Plate	581	15,272	590	15,886
Daisan Factory				
Iron Nail	1,566	46,896	1,626	50,572
Galvanized Steel Wire	3,208	104,057	3,818	131,344
Iron Wire	137	4,527	562	17,514
Galvanized Steel Sheet	15,001	279,576	12,763	327,437
Barbed Wire	1,391	55,432	2,191	78,667
Others	-	33,924	324	12,576
Total	-	524,412	21,284	618,110
Fuse, Fukae & Hiraoka Factories				
Worked article (combined)	838	39,020	1,357	62,263
Grand Total	-	1,565,909	65,447	1,716,670
Average per a month		260,985		286,111

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Governmental Allocation for
Production and Actual Production
for the latest term

Products	The 2nd term (July/Sept. 1949)					Allocation for the 3rd term (Oct./Dec.,1949)
	Allocation	Actual Production			Total	
		July	Aug.	Sept.		
Open Hearth Furnace Steel Ingot	15,000	4,955	4,709	5,103	14,767	16,000
Steel Bar	0	155	146	0	301	200
Wide Width Steel Hoop	5,000	1,563	742	1,914	4,219	6,700
Narrow Width Hoop	1,300	200	668	266	1,134	
Conduit Steel Pipe	150	49	54	57	160	200
Steel Crushing Ball	0	2	8	0	10	165
Cold Rolled Steel Hoop	281	128	96	177	401	348
Sheet Bar	5,000	315	2,369	1,650	4,334	5,000
Wire Nail	391	304	219	239	762	395
Galvanized Steel Sheet (For domestic	900	326	0	173	499	1,100
(For export	4,100	1,627	1,949	2,518	6,094	3,800
Galvanized Steel Wire	646	186	291	415	892	677
Total	32,768	9,810	11,251	12,512	33,573	34,585

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Products	The 3rd term (Oct./Dec. 1949)				
	Allocation	Actual Production			Total
		Oct.	Nov.	Dec.	
Open Hearth Furnace Steel Ingot	16,000	7,643	8,004	6,111	21,758
Steel Bar	200	30	38	162	230
Wide Width Steel Hoop	6,700	1,886	2,226	3,085	7,197
Narrow Width Hoop		320	295	242	857
Conduit Steel Pipe	200	60	61	50	171
Steel Crushing Ball	165	3	22	21	46
Cold Rolled Steel Hoop	348	112	119	113	344
Sheet Bar	5,000	1,638	3,002	1,424	6,064
Wire Nail	395	329	314	320	963
Galvanized Steel Sheet (For domestic	1,100	484	4	661	1,149
(For export	3,800	2,620	2,752	3,602	8,974
Galvanized Steel Wire	677	528	329	312	1,169
Total	34,585	15,653	17,166	16,103	48,922

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Products	The 4th term (Jan./March,1950)				
	Allocation	Actual Production			Total
		Jan.	Feb.	March	
Open Hearth Furnace Steel Ingot	20,000	8,237	7,954	9,034	25,225
Steel Bar	0	0	49	104	153
Wide Width Steel Hoop	6,000	1,614	2,813	3,368	7,795
Narrow Width Hoop		290	233	300	823
Conduit Steel Pipe	200	62	63	63	188
Steel Crushing Ball	90	37	38	18	93
Cold Rolled Steel Hoop	400	146	149	179	474
Sheet Bar	5,000	3,005	1,706	1,877	6,588
Wire Nail	896	247	300	316	863
Galvanized Steel Sheet (For domestic	1,100	468	505	667	1,640
(For export	11,500	2,884	210	234	3,328
Galvanized Steel Wire	3,582	1,097	1,228	1,015	3,340
Total	48,768	18,087	15,248	17,175	50,510

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Products	The 1st Term (April/June, 1950) Actual Production			
	April	May	June	Total
Open Hearth Furnace Steel Ingot	9,077	9,418	8,807	27,302
Steel Bar	134	16	0	150
Wide Width Steel Hoop)	2,566	2,583	3,441	8,590
Narrow Width Hoop)	109	151	322	582
Conduit Steel Pipe	40	48	53	141
Steel Crushing Ball	64	21	0	85
Cold Rolled Steel Hoop)	179	161	150	490
Sheet Bar	650	3,304	3,512	7,466
Wire Nail	231	211	228	670
Galvanized Steel Sheet (For domestic	500	755	736	1,991
(For export	1,114	1,093	1,596	3,803
Galvanized Steel Wire	826	655	1,116	2,597
Total	15,490	18,416	19,961	53,867

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Products	The 2nd Term (July/Sept. 1950) Actual Production			Total
	July	Aug.	Sept.	
Open Hearth Furnace Steel Ingot	8,917	9,112	4,293	22,322
Steel Billet	6,485	4,815	1,012	12,312
Steel Bar	0	0	0	0
Wide Width Steel Hoop)	2,980	3,532	269	6,781
Narrow Width Hoop)	247	291	35	573
Conduit Steel Pipe)	58	51	12	121
Steel Crushing Ball	0	0	0	0
Cold Rolled Steel Hoop)	179	269	250	698
Sheet Bar	1,996	1,857	209	4,062
Wire Nail	225	285	49	559
Galvanized Steel Sheet (For domestic	592	78	308	978
(For export	1,498	3,022	695	5,215
Galvanized Steel Wire	1,200	1,141	499	2,840
Barbed Wire	375	706	105	1,186
Total	24,752	25,159	7,736	57,647

Decline in output in September is due to the damages caused by Typhoon Jane.

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Products	The 3rd Term (Oct./Dec. 1950)			
	Actual Production			Total
	Oct.	Nov.	Dec.	
Open Hearth Furnace Steel Ingot	9,223	9,040		
Steel Billet	5,229	6,342		
Steel Bar	0	0		
Wide Width Steel Hoop)	1,484	4,137		
Narrow Width Hoop)	374	346		
Conduit Steel Pipe)	111	103		
Steel Crushing Ball)	0	0		
Cold Rolled Steel Hoop)	358	455		
Steel Bar	2,842	2,268		
Wire Nail	347	360		
Galvanized Steel Sheet (For dometic	49	866		
(For export	2,402	1,073		
Galvanized Steel Wire	1,653	1,781		
Barbed Wire	350	360		
Total	24,422	27,131		

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Cash on hand and Balance on Deposit in Banks

As of September 30, 1950.

Cash on hand		¥ 16,154,229.64
Current Deposit		27,243,380.27
Sanwa Bank, Head Office	¥ 8,018,522.34	
" Kawaramachi Branch	1,023,908.47	
" Amagasaki Branch	1,887,767.70	
Japan Industrial Bank, Osaka Branch	5,497,143.16	
Tokyo Bank Osaka Branch	8,497,773.47	
Daiichi Bank, Osaka Branch	290,105.86	
Osaka Bank, Semba Branch	40,513.45	
Kyowa Bank Osaka Branch	1,987,645.82	
Fixed Deposit		28,000,000.00
Sanwa Bank, Head Office	21,000,000.00	
Kyowa Bank Osaka Branch	2,000,000.00	
Japan Industrial Bank, Osaka Branch	5,000,000.00	

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MANUFACTURING AND INDUSTRY FILES
THE BOOKS

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I. SYNOPSIS

A. Name of Company: The Tokuyama Steel Sheet Company, Limited (Tokuyama Teppan Kabushiki Kaisha)

B. Date of Establishment: February 15, 1928

C. Purpose: Steel production and processing, sales and supplementary enterprises. Possession of securities and extension of funds permissible when business warrants.

D. Capital Stock:

1. Capital:

Authorized capital	¥100,000,000
Paid-up capital	100,000,000

2. Stock issued:

Description of Stock	Number of Shares Issued	Par Value per Share	Amount Paid-up per Share
✱ Tokuyama Steel Sheet Company, Limited	2,000,000	¥50	¥50

✱ Registered common stock.

The company's shares are transacted at security exchanges in Tokyo, Osaka, Kyoto, Hiroshima and Fukuoka.

3. Stock distribution:

a. Total number of shares:	2,000,000
b. Total number of shareholders:	2,817
c. Average number of shares held by shareholders:	710

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d. Shareholders classified by number of shares:

Classification	Number of Shareholders	Number of Shares	Percentage of Shareholders against Total Shares	Percentage of Shares against Total Stock
100,000 shares or more	2	332,100		16.6%
50,000 shares or more	1	50,973		2.5%
10,000 shares or more	23	429,665	0.8%	21.5%
5,000 shares or more	27	171,940	1.0%	8.6%
1,000 shares or more	267	413,113	9.5%	20.7%
500 shares or more	349	219,596	12.4%	11.0%
100 shares or more	1,709	364,839	60.7%	18.2%
100 shares or less	439	17,774	15.6%	0.9%
Total	2,817	2,000,000	100%	100%

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e. Prefectural distribution of shares and shareholders:

Prefecture	Shareholders Number	Shareholders Percentage	Shares Number	Shares Percentage
Hokkaido	7		1,182	
Aomori	1		384	
Iwate	1		200	
Akita	2	0.5%	139	0.1%
Fukushima	1		150	
Tochigi	2		300	
Ibaragi	1		400	
Chiba	14	0.5	17,335	0.9
Tokyo	97	3.4	139,022	7.0
Kanagawa	13	0.5	5,212	0.3
Shizuoka	21	0.7	2,758	0.1
Yamanashi	3		162	
Nagano	18	0.8	4,809	0.3
Niigata	2		300	
Toyama	26	0.9	5,408	0.3
Ishikawa	20	0.7	14,853	0.7
Fukui	36	1.3	12,667	0.6
Aichi	43	1.5	49,809	2.5
Mie	84	3.0	34,758	1.7
Gifu	30	1.1	7,622	0.4
Shiga	47	1.7	18,456	0.9
Kyoto	99	3.5	32,962	1.7
Nara	57	2.0	15,414	0.8
Wakayama	101	3.6	43,182	2.2
Osaka	504	17.9	717,833	35.9
Hyogo	377	13.4	158,412	7.9
Okayama	53	1.9	13,241	0.7
Tottori	36	1.3	8,659	0.4
Shimane	15	0.5	3,376	0.2
Hiroshima	132	4.7	100,877	5.0
Yamaguchi	758	26.9	514,801	25.7
Tokushima	25	0.9	7,890	0.4
Kagawa	38	1.3	7,967	0.4
Ehime	43	1.5	12,733	0.6
Kochi	19	0.7	11,334	0.6
Fukuoka	39	1.4	16,818	0.8
Saga	9		1,834	
Nagasaki	9		2,344	
Kumamoto	16		10,539	
Oita	11	1.9	2,936	0.9
Miyazaki	2		150	
Kagoshima	3		720	
Others	2		52	
Total	2,817	100.0	2,000,000	100.0

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f. Principal shareholders:

Name	Address	Number of Shares	Percentage
Yujiro Iwai, President, Iwai Sangyo Company, Ltd.	43 4-chome, Kitahama, Higashi-ku, Osaka	185,000	9.25%
Tadashi Okawa, Osaka Branch Manager, The Nikko Security Company, Limited	19 2-chome, Imahashi, Higashi-ku, Osaka	147,100	7.36
Shunjiro Kodama, Chairman, Tokuyu-kai Association	34 Oaza Kuriya, Tokuyama, Yamaguchi Pref.	50,973	2.55
Kohichi Kurokawa, President, Kurokawa & Company, Limited	1 2-chome, Kitahama, Higashi-ku, Osaka	41,121	2.06
Tadao Watanabe, President, The Sanwa Bank, Limited	21 3-chome, Imahashi, Higashi-ku, Osaka	40,000	2.00
Shotaro Kano, President, Kano & Company, Limited	9 4-chome, Shiomachi, Nishi-ku, Nagoya	28,000	1.40
Fumio Yamamoto, Hiroshima Branch Manager, Nomura Security Company, Limited	26 Kawaya-cho, Hiroshima	25,900	1.30
Shinsaku Nunoura, President, The Yamaguchi Bank, Limited	68 Kannonzaki-cho, Shimonoseki	20,384	1.02
Shinichi Okazaki, President, Dowa Fire and Marine Insurance Company, Limited	61 Shimmei-cho, Kita-ku, Osaka	20,000	1.00
Nobuhisa Yamamoto	52 Kichijoji, Musashino, Tokyo	20,000	1.00
Izumi Matsumura	1 Tonda-cho, Tsuno-gun, Yamaguchi Prefecture	19,800	0.99
Senzuchi Fujii	416 Oaza Kume, Tokuyama, Yamaguchi Pref.	19,400	0.97
Daiichi Kobayashi	307 Katayama, Suita-shi, Osaka	19,200	0.96

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Yoshimasa Tateno	Tonda-cho, Tsuno-gun, Yamaguchi Prefecture	18,400	0.92
Hidetsugu Nakao	831 2-chome, Denencho-fu, Ota-ku, Tokyo	18,400	0.92
		673,678	

g. Shares in possession of the company's officials:

Name	Position	Address	Shares Possessed
Shunjiro Kodama	President	503 Kichijoji, Musashino-shi, Tokyo	16,000
Kozo Watanabe	Senior Managing Director	250 Oaza Kuriya, Tokuyama, Yamaguchi Pref.	12,000
Yasushi Yoshihara	Managing Director	6,678 Oaza Tokuyama, Tokuyama, Yamaguchi Prefecture	8,600
Yutaka Minoda	Manag. Director and Director of Business Dept.	250 Oaza Kuriya, Tokuyama, Yamaguchi Pref.	13,730
Dansuke Takamatsu	Director	do	4,600
Sadao Yamakawa	Director and Director of Industrial Eng. Department	do	6,800
Kyohei Nakano	Director	73 Takabancho, Meguro-ku, Tokyo	8,000
Yoshihiko Murakami	Director and Director of Technical Dept.	324 Oaza Kuriya, Tokuyama, Yamaguchi Prefecture	8,030
Nobuhisa Yamamoto	Director	52 Kichijoji, Musashino-shi, Tokyo	20,000
Toyozo Uwatani	Auditor	250 Oaza Kuriya, Tokuyama, Yamaguchi Pref.	10,000
Kunimichi Hara	Auditor	86 Nango-cho, Nishinomiya	500
Hideo Iwai	Auditor	Gunke, Higashinada-ku, Kobe	2,000
			110,260

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E. Corporate Bonds Issued (as of September 30, 1950):

Details	Secured Bonds	
	1st Issue "1" Series	1st Issue "ro" Series
Classification	Coupon Bonds	Coupon Bonds
Total issuance	¥50,000,000	¥50,000,000
Unredeemed Bonds		¥50,000,000
Denominations	¥5,000 10,000 100,000	¥5,000 10,000 100,000
Floatation Price	¥97.50	¥98.00
Interests	8½% per annum	8½% per annum
Date of issues	July 10, 1950	August 21, 1950
Unredeemable Periods	1 year	1 year
Maturity of Bonds	5 years	5 years
Provision for Redemptions	Face value of 1 million or more to be redeemed each period prior to interest payable dates.	Face value of 1 million or more to be redeemed each period prior to interest payable dates.
Interest Due Dates	10th of January and July each year.	21st of February and August each year.
Place of Payments of Principal and Interest	The Sanwa Bank, Ltd. and others.	The Sanwa Bank, Ltd. and others.
Trustee	do	do
Security	First precedence of open mortgage on the Tokuyama Plant.	First precedence of open mortgage on the Tokuyama Plant.

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Underwriter	Yamaichi Security Company, Limited and others.	Yamaichi Security Company, Limited and others.

Note: No corporate bonds were issued prior to this fiscal period.

F. Offices and Plants:

Classification	Location	Line of Business
Head Office and Tokuyama Plant	3⅘ Oaza Kuriya, Tokuyama, Yamaguchi Pref.	Manufacture and sales of steel sheet, hoop, galvanized iron sheet, drum and production of electric steel ingot.
Tonda Plant	4,900 Tonda-cho, Tsuno-gun, Yamaguchi Prefecture	Production of cold rolled steel hoop.
Kushigahama Plant	332 Oaza Kuriya, Tokuyama, Yamaguchi Prefecture	Production of shovel and processing of secondary products.
Tokyo Office	870 Marunouchi Bldg., Chiyoda-ku, Tokyo	Sales and liaison.
Osaka Office	35 4-chome, Koraibashi, Higashi-ku, Osaka	Sales, liaison and capital stock details.
Hiroshima Office	12 Motomachi, Hiroshima	Sales and liaison.
Yawata Office	845 3-chome, Kita Honmachi, Yawata	Sales and liaison.
Kushigahama Office	331-3 Oaza Kuriya, Tokuyama, Yamaguchi Prefecture	Sales and liaison.

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G. Career of Present Officials:

Name	Position	Date of Birth	Outline of Career
Shunjiro Kodama	President	17 Sept. 1894	Entered Iwai & Company, Limited (Iwai Sangyo Company, Limited) in August, 1912; appointed a director in December, 1942; appointed senior managing director of the Tokuyama Steel Sheet Company, Limited in April, 1946, and president in November, 1949.
Kozo Watanabe	Senior Managing Director	4 March 1895	Graduated the Yamaguchi Higher Commercial School and entered Iwai & Company, Limited in March, 1917; appointed a director of the Tokuyama Steel Sheet Company, Limited in January, 1944, managing director in October, 1944 and senior managing director in May, 1950.
Yasushi Yoshihara	Managing Director	27 Feb. 1899	Graduated the Osaka Higher Technical School in March, 1917 and entered the Osaka Steel Sheet Manufacturing Company in June, 1920. Entered the Tokuyama Steel Sheet Company, Limited in March, 1928; appointed a director in April, 1944, and a managing director in May, 1947.
Yutaka Minoda	Managing Director	20 Jan. 1899	Graduated the Osaka Higher Commercial School and entered Iwai & Company, Limited in March, 1919. Entered the Tokuyama Steel Sheet Company, Limited in April, 1938; appointed a director in April, 1944, a standing auditor in October, 1946, and a managing director in May, 1948 (concurrently, director of Business Department).
Dansuke Takamatsu	Director	7 Dec. 1893	Entered the Osaka Steel Sheet Manufacturing Company in June, 1916; the Tokuyama Steel Sheet Company, Limited in March, 1928, and appointed a director in April, 1944.
Sadao Yamakawa	Director	11 Dec. 1899	Graduated the School of Mining and Metallurgy, Kyoto Imperial University and entered the Osaka Steel Sheet Manufacturing Company in March, 1927. Entered the Tokuyama Steel Sheet Company, Limited in April, 1938 and appointed a director in May, 1947 (concurrently, director of Industrial Engineering Department).

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Kychei Nakano	Director	27 Aug. 1906	Entered the Osaka Steel Sheet Manufacturing Company in April, 1924. Entered the Tokuyama Steel Sheet Company, Limited in March, 1928, and appointed a director in May, 1948.
Yoshihiko Murakami	Director	27 Jan. 1909	Graduated the Higher Technical School attached to the Osaka Technical College and entered the Nippon Malleable Cast Iron Company in March, 1930. Entered the Tokuyama Steel Sheet Company, Limited in April, 1936, and appointed a director in May, 1948 (concurrently, director of Technical Department).
Nobuhisa Yamamoto	Director	14 Feb. 1907	Entered the Osaka Steel Sheet Manufacturing Company in August, 1924; the Tokuyama Steel Sheet Company, Limited in March, 1928, and appointed a director in November, 1950.
Toyozo Uwatani	Auditor	20 Oct. 1900	Entered Iwai & Company, Limited in April, 1915; the Osaka Steel Sheet Manufacturing Company in November, 1924; and the Tokuyama Steel Sheet Company, Limited in March, 1928, and appointed an auditor in May, 1948.
Kunimichi Hara	Auditor	11 Dec. 1890	Graduated the Tokyo Imperial University and the entered the Ministry of Finance in April, 1916; an Imperial appointee in August, 1934; director of the Osaka Revenue Superintending Bureau in August, 1935; deputy director of the Manchurian Affairs Bureau in December, 1937; appointed a standing auditor of the Nippon Iron and Steel Company, Limited in December, 1939; managing director and vice-president of the said company in December, 1940; appointed vice-governor of the Nippon Security Exchange in June, 1943; appointed executive director of Nomura Gomei Kaisha in September, 1944, and retired in December, 1945. Appointed an auditor of the Tokuyama Steel Sheet Company, Limited in June, 1949.
Hideo Iwai	Auditor	20 May 1924	Graduated the Department of Physics, Osaka Imperial University in September, 1944 and entered the Dai Nippon Celluloid Company. Entered Iwai & Company, Limited in May 1946; and appointed an auditor in June, 1949. Appointed an auditor of the Tokuyama Steel Sheet Company, Limited in November, 1950.

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II. HISTORY OF COMPANY

A. Establishment - Reasons and Development:

In February, 1916, the Osaka Steel Sheet Manufacturing Company, Limited proceeded to construct a plant in Tokuyama, Yamaguchi Prefecture with the object of undertaking domestic production of steel sheet, an item in which Japan at that time was dependent on imports. The plant was completed in August, 1918 and therewith followed production.

In order to facilitate the development of this plant, it was decided in February, 1928 to place the management of the plant on an independent basis. With Katsujiro Iwai and his associates taking the role of promoters, the Tokuyama Steel Sheet Company, Limited was thereby established with a capital of ¥5,000,000. The newly created company immediately began fully operating every phase of the enterprise it has succeeded to.

In the beginning, the steel sheet rolling mill consisted of four plants but, at later dates, two additional rolling mills were added to boost production. Furthermore in 1935, the Krupp's steel hoop mill was newly installed and production of steel hoop was started. This was truly the beginning of domestic production of steel hoop.

In conformity with the situation in 1945, the erection of the Tonda Plant was undertaken with the object of manufacturing bearings and other war materials. With the termination of war, however, this plant was converted into a cold rolled steel hoop mill. During the same year, the Kushigahama Plant was built and commenced production of agricultural implements and replacement parts, as well as bicycle and motor car parts. In July, 1948, the capital of the company was increased to ¥50,000,000 and a program was launched to modernize various machineries and equipments. In the meantime, the construction of a galvanized iron sheet plant which had been underway was completed. In January, 1949, the production of galvanized iron sheet was started in the midst of maximum domestic and overseas demands for the product. In December, 1949, the capital was further increased to ¥100,000,000 in order to cope with the situation arising out of the company's production boost parallel with the industrial recovery in Japan.

B. Transitions in Industrial Establishment and Facilities:

February, 1928	The production of steel sheet commenced with four rolling mill units.
April, 1930	Another steel sheet rolling mill unit installed.

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January, 1934	An additional uhit again installed to raise total to six.
March, 1935	The production of steel hoop commenced with newly installed Krupp's continuous type steel hoop mill.
April, 1935	The production of medium steel plate was commenced with a newly installed rolling mill.
January, 1939	Two drum making units were erected and through-processing of drum with company-made steel sheet started.
September, 1939	With the installation of two 5-ton electric furnaces and a three high rolling mill completed, the production of sheet bar and billet were started.
April, 1945	The Tonda Plant was newly erected on the site of the company-owned ground at Tonda-cho, Tsuno-gun, Yamaguchi Prefecture. While the production of bearings and other war materials were still in the blue-print stage, the plan was abandoned due to cessation of war.
July, 1945	With the completion of the Kushigahama Plant, the production of shovel and scoop, agricultural implement and replacement parts, as well as bicycle and motor car parts were started with press processing method.
December, 1947	Two cold rolling mill units were newly installed for the production of cold rolled steel hoop.
January, 1949	The production of galvanized iron sheet was begun following the completion of the erection of galvanizing facilities.
April, 1949	Three cold rolling mill units were additionally installed at the Tonda Plant to augment the production of cold rolled steel hoop.
September, 1950	Mechanization of one steel sheet rolling mill and erection of gas furnaces completed and placed in operation.

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C. Transitions in Capital:

Date	Capital Authorized	Paid-up	Remark
February, 1928	¥5,000,000	¥2,500,000	Organized
November, 1934		3,750,000	Subscriptions received
April, 1937		5,000,000	do
October, 1938	8,000,000	6,500,000	Increase of capital
June, 1939		8,000,000	Subscriptions received
March, 1944	10,000,000	10,000,000	Increase of capital
July, 1948	50,000,000	50,000,000	do
January, 1950	100,000,000	100,000,000	do

D. Successive List of Executives:

Name	Position	Period Served
Eiichiro Iwai	President	Feb. 1928 - Mar. 1930
Katsujiro Iwai	do	Apr. 1930 - Dec. 1935
Yujiro Iwai	do	Dec. 1935 - Mar. 1944
Kazuta Tomoda	do	Mar. 1944 - Feb. 1946
Yoshizo Murakami	do	Apr. 1946 - Oct. 1949
Shunjiro Kodama	do	Nov. 1949 -

E. Company's Status as Affected by Post-war Ordinances:

1. Not designated as restricted concern.

2. None of facilities designated for reparations.

3. Designated as a special accounting company in August, 1946 in accordance with the Special Accounting Company Emergency Measure Law. But in November, 1936, an approval was granted to the company's application for an exemption from the special accounting company designation.

4. Not subject to the Law for the Elimination of Excessive Concentration of Economic Power.

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III. BUSINESS ENTERPRISE AND FACILITIES

A. Business Enterprise:

1. Line of products:

Ordinary steel ingot
Special steel ingot
Ordinary steel sheet bar and billet
Special steel sheet bar and billet
Ordinary steel sheet
Ordinary steel plate
Special steel plate
Galvanized iron sheet
Ordinary steel hoop
Special steel hoop
Cold rolled ordinary steel hoop
Cold rolled special steel hoop
Drum, shovel, scoop and various machinery parts

2. Present status of steel industry and position occupied by the company:

Similar with other industries of Japan, the steel industry was reduced to a state of paralysis immediately following the termination of the war. But by responding energetically to the government's rehabilitation program, this enterprise made a conspicuous come-back. In the case of ordinary rolled steel, the production recorded 569,074 tons in 1947, 1,115,395 tons in 1948, and 2,259,424 tons in 1949. However, with the abolition of subsidies on iron and steel at the end of June, 1950, the industry was temporarily placed in position of a serious concern over the outlook. But the outbreak of Korean war created a tendency to bolster production through improvements and newly installed facilities.

Note: 1947 and 1948 figures are based on the Iron and Steel Industry reference publications, and 1949 on report of the Nippon Tekko Remmei (Federation of Iron and Steel Industry in Japan).

Listed under ordinary rolled steel materials are rail, formed steel, bar, wire-rod, hoop, tin-plate, steel sheet, pipe and tube, wheel, etc. It is not always feasible to draw comparisons of output according to items, but if the output of the company's chief products were to be compared on the basis of actual output during the first period of fiscal 1950, the steel sheet represented 7.5% of the national total or sixth among the steel sheet producers and 38.1% or first among the steel hoop producers.

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The following table shows the recent relative position occupied by this company among the manufacturers of ordinary rolled steel materials:

	Production (in tons)				
Name of Company	1st Period Fiscal 1950	Position	Fiscal 1949	Position	Fiscal 1948
Yawata Seitetsu	364,732	1	749,481	1	357,005
Nippon Kokan	207,031	2	319,884	2	190,492
Fuji Seitetsu	176,514	3			
Kawasaki Seitetsu	120,047	4	251,533	3	111,772
Kobe Seiko	90,246	5	154,853	4	94,496
Tokuyama Teppan	49,922	6	59,911	8	36,447
Shin Fuso Kinzoku	43,558	7	67,878	5	61,855
Amagasaki Seiko	38,804	8	63,935	6	42,822
Daido Kohan	27,444	9	61,807	7	40,889
Kokura Seiko	21,937	10	43,889	11	18,756

Note: a. Production figures are supplied from statistical tables prepared by the Nippon Tekko Remmei (Federation of Iron and Steel Industry in Japan).

b. The Yawata Seitetsu's figures for 1948 and 1949 are based on the Nippon Seitetsu's productions.

B. Facilities:

1. Production and industrial facilities:

The present industrial establishment consists of three plants and five branch offices. Investments in fixed assets which, evaluated as of September 30, 1950, total ¥381,377,000, consist of ¥352,600,000 in the Tokuyama plant, ¥23,578,000 in the Tonda plant, ¥3,293,000 in the Kushigahama plant and ¥1,906,000 in the branch offices. The Tokuyama plant constitutes an investment of 92% of the total fixed assets.

From the angle of production value, the Tokuyama plant accounted for ¥1,659,274,000 or 97.4% of the total output registered by three plants during the current period. This is only natural, for the Tonda and Kushigahama plants are devoted to the manufacture of secondary products. The Kushigahama plant, moreover, is presently operated on a contract basis.

As the first phase of the company's rationalization program, mechanization of one steel sheet rolling mill and its supplementary facilities such as gas generator and tilting table were newly erected in the later part of September, 1950. The detailed facilities of the company are as follows:

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a. Industrial facilities:

Classification	Structure	Building Area (tsubo)	Ground (tsubo)	No. of Employee
Tokuyama Plant:				
Steel sheet mill	Steel frame	3,568		
Steel hoop mill	Steel frame	2,162		
Steel mill	Steel frame	349		
Sheet bar and billet mill	Steel frame	439		
Drum manufacturing plant	Steel and wooden frames	842	74,476	1,405
Galvanizing plant	Wooden frame	345		
Laboratory	Brick	401		
Clinic	Wooden frame	98		
Mutual facilities	Steel and wooden frames	3,692		
Company houses	Wooden frame	5,087		
Total		16,983	74,476	1,405
Tonda Plant	Wooden frame	1,524	92,791	75
Company houses	Wooden frame	372		
Kushigahama Plant	Wooden frame	532	2,381	
Tokyo Office	Ferro-concrete	33		17
Company houses	Wooden frame	180	494	
Osaka Office	Ferro-concrete	25		15
Company houses	Wooden frame	116	207	
Hiroshima Office	Ferro-concrete	12		4
Company house	Wooden frame	39	33	
Yawata Office	Wooden frame	18		5
Company houses	Wooden frame	67	120	
Kushigahama Office	Wooden frame	28	456	3
Total		19,979	170,958	1,524

Note: Above survey as of September 30, 1950.

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ound ayho)	No. of Employee	Business Enterprise	Book Value	Location	Remark
		Manufacture and sales of steel sheet and plate, steel hoop, ingot, galvanized iron sheet and drum, and supplementary enterprises.	¥42,250,000 32,912,000 4,096,000 3,402,000		
4,476	1,405		1,862,000 991,000 17,000 987,000	Tokuyama	
			18,739,000 6,105,000		303 homes
4,476	1,405		111,361,000		
2,792	75	Manufacture of cold rolled finished hoop.	7,161,000	Tonda-cho Yamaguchi Prefecture	38 homes
2,381		Manufacture of shovel and processing of secondary products.	1,250,000	Tokuyama	
464	17	Sales and liaison.	1,035,000	Tokyo	Rented. 6 homes
207	15	Sales, liaison, and stock transactions.	313,000	Osaka	Rented. 5 homes
33	4	Sales and liaison.	17,000	Hiroshima	Rented. 1 home
120	5	Sales and liaison.	42,000	Yawata	Rented. 2 homes
456	3		208,000	Tokuyama	
9,958	1,524		¥121,387,000		

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b. Principal machineries and equipments:

Machinery and Equipment	Quantity	Nominal Capacity	Material Used
Steel sheet mill:			
Two high steel sheet rolling mill	5		
Two high steel plate rolling mill	1		Sheet bar and slab
Two high cold sheet rolling mill	4	Steel sheet, 110,000 tons per annum and Steel plate, 45,000 tons per annum	
Tilting table	5		
Lifting table	1		
Operating stand	1		
Gas generator (Wood's type, 35-tons/day)	1		
Heating furnace	11		
Annealing furnace	4		
Electric motor	25	4,300 h.p.	
Steel hoop mill:			
Continuous type steel hoop mill	1	Steel hoop, 60,000 tons per annum	Billet
Coiling machine	3		
Heating furnace	2		
Electric motor	150	7,940 h.p.	
Steel mill:			
5-ton electric arc furnace	2	Steel ingot, 10,000 tons per annum	
Integral transformer	2	1,800 kva.	Scrap iron
Air compressor	2		
Electric motor	5	148 h.p.	

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Material Used	Finished Product	State of Operation
Sheet bar and slab	Ordinary steel sheet Ordinary steel plate Special steel plate	4 steel sheet, 1 steel plate and 2 cold sheet rolling mills in operation.
Billet	Ordinary steel hoop Special steel hoop	In operation
Scrap iron	Ordinary steel ingot Special steel ingot	In operation

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Steel bar and billet mill:

Three high sheet bar and billet mill	1	Sheet bar and billet, 45,000 per annum	Ordinary st ingot
Tilting table	1		Special ste ingot
Heating furnace	1		
Electric motor	29	2,028 h.p.	

Drum manufacturing plant:

Steel sheet shearing machine	2	400,000 drums per annum	
Roller conveyor	2		Ordinary st sheet
Sheet punching machine	5		
Double seamer	4		
Infra red rays heat treatment facilities	1		
Electric motor	20	59 h.p.	

Galvanizing plant:

Plating machine	1		
Acid cleansing bath	1	Galvanized iron sheet, 12,000 tons per annum	
Speed reducer	3		Ordinary st sheet
Heating furnace	1		
Corrugating machine			
Electric motor	12	28 h.p.	

Tonda Plant:

Four high cold sheet rolling mill	4		
Two high cold sheet rolling mill	1		Ordinary st hoop

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Ordinary steel ingot	Slab, sheet bar and billet	In operation
Special steel ingot		
	200-liter drum	
Ordinary steel sheet	170-liter drum	In operation
Ordinary steel sheet	Galvanized iron sheets (plain and corrugated)	In operation
Ordinary steel hoop	Cold rolled ordinary steel hoop	In operation

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Annealing furnace	4	Cold rolled steel hoop, 3,000 tons per annum	Special ste hoop
Electric quenching furnace	1		
Acid cleansing bath	1		
Electric tempering furnace	1		
Revolving shearing machine	2		
Electric motor	27	350 h.p.	

Kushigahama Plant:

Crank press	12		Ordinary st sheet
Eccentric press	3		
Punching press	2	600 tons per annum	Special ste plate
Friction press	1		
Electric furnace	3		
Electric motor	18	111 h.p.	

Laboratory:

Amsler's tension tester	1	50-ton
Amsler's tension tester	1	10-ton
Shelby's impact tester	1	30-ton
Hardness meter	5	
Spring tester (width, 25 mm; thickness, up to 5 mm; pendular width, 25 mm.	1	
Analytical apparatus	1	
Microscope	3	

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Special steel hoop	Cold rolled special steel hoop		
Ordinary steel sheet	Shovel, scoop and replacement parts for various machineries	In operation	
Special steel plate			

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Note: (1) The current operation schedules are 24 hours each for steel sheet and galvanizing plants, 16 hours for hoop mill, and 8 hours for the others.

(2) In addition to the foregoing list are facilities for loading and unloading, and water supply, the details of which are as follows:

Quay	66 meters
Pier	342 meters
20-ton shear-leg	2
3½-ton transporter	1
3-ton jib crane	5
5-ton locomotive crane	2
3-ton gantry crane	1
1½-ton jib crane	1
Reservoir	24,000 cubic meter (capacity)

2. Improvement of facilities:

a. As one phase of the company's rationalization movement, mechanization of one unit of steel sheet rolling mill was commenced in October, 1949 with an outlay of ¥30,500,000. The project was completed in the latter part of August and its operation begun from September 1, 1950. Of the funds required, ¥22,500,000 was obtained through a loan from the Industrial Bank of Japan, Limited and ¥8,000,000 through an increase in the capital. The second phase of modernization program is currently under preparation.

b. Heretofore, the drying of drum paint was dependent upon a slow natural drying process. To cope with increase in drum demands, an installation of new heat treating facility utilizing infra-red rays was completed in the latter part of November, 1950 with an appropriation of ¥2,000,000. This facility not only made possible of drying 2,400 drums per day in comparison to 400 from the previous means, improvements were also attained in their adhesiveness and elasticity as well.