

170

3420

N. Y. - #341

~~10050-211~~  
Copy 1

~~5417/201~~

Copy No. 28

CONFIDENTIAL

JAPANESE FILES RESEARCH PROJECT

DEPARTMENT OF JUSTICE  
WAR DIVISION  
ECONOMIC WARFARE SECTION

25 April 44

AND

FOREIGN ECONOMIC ADMINISTRATION  
ECONOMIC INTELLIGENCE DIVISION

REPORT ON

JAPANESE PURCHASES OF ELECTRIC POWER EQUIPMENT

April 25, 1944

Prepared by:  
Ann Friedman  
Foreign Economic Administration  
Under Direction of:  
Hildemar E. Johnson  
Department of Justice  
New York, New York

TABLE OF CONTENTS

	<u>Pages</u>
I. Introduction - - - - -	1
II. Japan Proper - - - - -	2 - 4
A. Fuji River Electric Power Co. - - - - -	2 - 3
1. Fuji Gawa Power Station No. 1 - - - - -	2
2. Fuji Gawa Power Station No. 2 - - - - -	2
3. Kabahara Substation - - - - -	3
B. Japan Power Transmission Co. - - - - -	3 - 4
C. Ogoochi Reservoir Inspection Office - - - - -	4
D. Armine Dam - - - - -	4
III. Manchuria - Korea - - - - -	5 - 6
A. Yalu (Oryokko) Hydroelectric Power Co. - - - - -	5 - 6
IV. Manchuria - - - - -	6 - 8
A. Sungari River Project, Bureau of Hydroelectric Construction, Manchuria - - - - -	6 - 7
B. Kyohakuko Hydroelectric Station - - - - -	7 - 8
C. Kichirinsho Dam, Manchuria - - - - -	8
V. Korea - - - - -	8 - 9
A. Chosin River Hydroelectric Power Co. - - - - -	8
B. Ryuko Substation - - - - -	9
VI. China - - - - -	9
A. Rodai Industry (Rodai Kogyo) - - - - -	9
VII. Formosa - - - - -	9 - 10
A. Formosan Electric Power Co. - - - - -	9 - 10
VIII. Mongolia - - - - -	10 - 11
A. Mongolian Electric Power Co. - - - - -	10 - 11
IX. Unspecified - - - - -	11 - 12
A. Sanyo Chuo Hydroelectric Co. - - - - -	11
B. Kanko Electric Power Co. - - - - -	12
C. Kokai Electric Power Co. - - - - -	12
Footnotes - - - - -	12

Economic Warfare Section  
War Division  
Department of Justice  
Washington, D. C.

Confidential Report  
April 25, 1944 (N. Y. #341)  
Re: Japanese Purchases of  
Electric Power Equipment  
Submitted by: Ann Friedman  
Foreign Economic Adminis-  
tration  
New York, New York

REPORT ON

JAPANESE PURCHASES OF ELECTRIC POWER EQUIPMENT

I. Introduction

The following report is based on the orders and inquiries for electric power equipment and construction machinery placed in the United States between 1937 and 1942 by Japanese government owned and privately owned electric power companies. Power companies in Japan Proper, Manchuria, Korea, Formosa, Occupied China, and Mongolia are included, and so far as possible, the companies are treated according to geographical location.

Two of the sixteen electric power companies discussed in this report, namely, the Sungari River Project located in Manchuria and the Yalu Hydroelectric Power Company in Manchuria and Korea, "rank among the greatest engineering undertakings in the world. Both are frequently compared in the Japanese press to the Boulder Dam on the Colorado River in the United States." (1) The Yalu Hydroelectric Co. is discussed in this report under Section III-A and the Sungari River Project under Section IV-A.

In reference to some of the electric power companies dealt with, the orders and inquiries contained information regarding the following: location of dams, power stations and substations; quantity of electricity to be generated by a given power development; industries and areas to which a power development was to supply electricity; size of dams; completion date of a project under construction. In instances where such information was available, it is included in the discussion of the power company to which it applies.

The importance of a power company to the total Japanese industrial economy should not be judged in terms of the orders and inquiries it placed in the United States. For example, the Yalu Hydroelectric Company, referred to above, supplies much of the electric power consumed in Korea and Manchuria, yet it purchased only eight steam shovels, valued at \$174,057.00 in the United States.

The material contained in this report was obtained from orders and inquiries placed through the Japanese trading companies Mitsui Bussan Kaisha, Mitsubishi Shoji Kaisha, and Okura & Co. The files of these trading companies are now kept by the Alien Property Custodian at a warehouse located at 27 Cliff St., New York City.

N. Y. - #341

II. Japan Proper

A. Fuji River Electric Power Co. (Fuji Gawa Denryoku K.K.)

1. Fuji Gawa Power Station No. 1.

This power plant was to be built in Yamanashi Prefecture. The waters of the Fuji River, amounting to 73.3 cubic meters per second, were to be utilized at approximately 70 meters effective head, for generating approximately 43,000 kw. of electric power. The power was to be transmitted to the Kabahara substation (discussed below) through 19 kilometers of 66,000 volt lines, and ultimately consumed by an aluminum factory. (2)

Mitsui Inquiry TE 4038 (11/10/38) was sent to General Electric, I. P. Morris, and Newport News Shipbuilding & Drydock, and called for the following:

- 3 17,000 kw. Water turbines
- 3 17,000 KVA Generators
- 3 17,000 KVA Main transformers
- 2 150 KVA 3-phase station service transformers
- 1 Main switchboard and switching apparatus
- 1 Station service switchboard and switching apparatus

This equipment was to be delivered at the Toshima railroad station on the Fuji-Minobu Line. Negotiations on this inquiry were also being carried on with A.E.G. and Siemens.

2. Fuji Gawa Power Station No. 2.

This power station was also to be constructed in Yamanashi Prefecture. The waters of the Fuji River, amounting to 83.3 cubic meters per second were to be used at approximately 77.4 meters effective head, in generating approximately 52,800 kw. of electric power. The generated power at 840 Volts (D.C.) was to be supplied to an aluminum factory in the vicinity of the power station. (3)

Mitsui Inquiry MF 4438 (1/16/39) was sent to General Electric, I. P. Morris, Newport News Shipbuilding and Drydock, and called for the following:

- 4 16,500 kw. Water turbines
- 4 13,440 kw. D. C. generators
- 1 500 kw. House turbine
- 1 500 KVA House generator
- 2 150 KVA station service transformers
- 1 Switchboard and switching apparatus

This equipment was to be delivered at the Iwabuchi railroad station on the Tokkaido Line.

3. Kabahara Substation.

This substation was to be established in the town of Kabahara in Shizuoka Prefecture. 63,000 kw. of power, developed by two power stations at the upper part of the Fuji River, was to be transmitted at 77,000 Volts through double transmission lines (approximately 40 kilometers in length) to the Kabahara Substation. At the substation the power was to be transformed to 11,000 V. and fed to an aluminum factory in the neighborhood. (4)

In the specifications for Power Station No. 1 it was stated that "The power will be transmitted to the Kabahara Substation through 66,000 Volt lines of about 19 km." And in the specifications for the Kabahara Substation, it was stated that "power developed by two power stations at the upper stream of River Fuji, 63,000 kw. in total, will be transmitted at 77,000 V. through double transmission lines of approximately 40 km. in length." The inconsistency in these two statements can possibly be explained by the fact that the specifications for the Kabahara Substation were referring to the total power developed at the two power stations, and the total length of the transmission lines connecting the two stations with the substation.

Mitsui Inquiry TE 4439 (1/16/39) was placed with General Electric. A quotation was requested on the following:

- 3 35,000 KVA Main transformers
- 2 5,000 KVA Factory service transformers
- 1 Switching and switchboard apparatus
- 1 Switching and switchboard apparatus for factory service transformers

This equipment was to be delivered to the Iwabuchi railroad station on the Tokkaido Line. Ultimately it was decided to purchase this equipment in Japan.

B. Japan Power Transmission Co. (Nippon Hassoden K.K.)

A letter from General Electric, Tokyo, to General Electric, New York, states "Nippon Hassoden K. K. is a new government company whose official organization will not be completed until April, 1939. The Company has actually been operating in some phases of its work under a temporary organization for some time". (5)

Mitsubishi Order #2542.

This file contains neither a formal inquiry, nor order. A letter from the National Valve and Manufacturing Co. (Navco), Pittsburg, to Mitsubishi, indicates that Navco had received an order for Nippon Hassoden through Ryobi Denki Shokai, Ltd., an electrical construction and engineering concern closely affiliated with Mitsubishi. The order covered high pressure steam and feed piping. (6)

Navco needed some additional technical details before completing the order, and had contacted Mitsubishi for this purpose. However, Mitsubishi could not supply the information. (7)

Okura Inquiries #23676, 23677, 23678 (4/16/40) were placed with Republic Steel Co. and called for high pressure steam and feed water pipes for the Onada, Saijio and Kokura Power Plants of Japan Power Transmission Co.

C. Ogoochi Reservoir Inspection Office (Ogoochi Chosuichi Kenetsu Jimusho)

According to a letter written in 1939, "The Tokyo Municipality is planning to make great water dam 320 meters in length; 150 meters in height, at a construction cost amounting to 40 million yen, and it is scheduled to finish the job within 1942 and for this purpose a special office named Ogoochi Chosuichi Kenetsu Jimusho has been newly established . . . ." (8)

Ogoochi Dam ordered, through Mitsubishi, 2 concrete mixers from the Koehring Company and 2 motors for the mixers from Westinghouse. The total price was \$23,641.90. (Orders #8405 and #8405A - 9/19/38.)

Ogoochi Dam placed an inquiry with the Lidgerwood Mfg. Co., through Mitsubishi, for 2 cableways, each with a span of 1425 feet and a maximum capacity of 25 tons. Ogoochi decided to purchase second-hand cableways and Mitsubishi refused to quote on any cableways other than new ones. (N.Y. 558-8/31/36.)

Inquiries through Okura.

#22454 Hug Co. 1. Motor truck powered by Caterpillar diesel engine-  
2/27/37 capacity 20 tons of hard sand stone

#22545 1 Cone Crusher 5½ ft. - 1/2 in. setting  
4/16/37 1 " " 4 ft. - 3/6 in. setting  
1 Vertical disc crusher

#23008 Koehring Co. 2 Concrete mixers, 4 cubic yard capacity  
6/2/38

D. Armine Dam, Toyama Prefecture

In 1937, Mitsui inquired of several United States manufacturers for a concrete mixing plant to be used in the construction of this dam. 900,000 cubic yards of concrete were to be used in building the dam. (T.E. 7176)

III. Manchuria - Korea

A. Yalu (Oryokko) Hydroelectric Power Company (Yalu (Oryokko) Suiryoku Denki)

The Yalu Hydroelectric Power Company was established in 1937 to facilitate the development and utilization of the potential source of hydroelectric power that the Yalu River provided. The power, so developed, was to be consumed in Korea and Manchuria. The company was capitalized at 100,000,000 yen, with the capital supplied by the Japanese, Korean, and Manchurian governments, and the Noguchi interests. Mr. Yuki Noguchi was appointed manager of the company, and the Japan Nitrogen Company (Nippon Chisso Hiryo), a Noguchi subsidiary with large interests in Korea, was designated the purchasing agent for the Yalu power projects. (9)

The original plans for the development of the Yalu River called for the construction of several power plants, with the main stream dammed up at the site of each power plant. When completed, the total capacity of all of the plants was to be more than 1,600,000 kilowatts. (10)

The largest of the Yalu plants, the Suiho Power Plant, was to be constructed first. This plant was to be located at Suihodo in Heianhokudo, Korea, 40 kilometers from the mouth of the Yalu River. The Suiho dam was to be 950 meters long at the top and 100 meters above the bed of the river. The capacity of the reservoir was to be 7,600,000,000 cubic meters. (10)

Seven 100,000 kilowatt generators were to be installed at Suihodo. Three of the generators were to be for 50 cycle and 60 cycle use, two for 50 cycle use, and two for 60 cycle use. The 60 cycle equipment was for Korea, and the 50 cycle for Manchuria. (10)

The power generated at the plant was to be transmitted widely in Korea and Manchuria. Several 220 K.V. transmission lines were to connect Suihodo with points in Korea and Manchuria. Other power plants to be constructed along the Yalu were also to be connected with Suihodo by 220 K.V. tie lines. (10)

Orders.

The Yalu River Hydroelectric Power Company placed only two orders in the United States. These orders were placed with the Marion Steam Shovel Company, and were for 8 type 381 electric shovels valued at \$174,057.79. (Mitsubishi Orders #8114 and #8869.)

Inquiries for Miscellaneous Construction and Power Equipment.

(Mitsubishi Inquiry N. Y. #1014.) In 1937, a group of officers of the Chosin River Hydraulic Power Co. of Korea came to the United States to investigate and study some of the large hydroelectric developments in this country. Ostensibly these men were representatives of Chosinko but the files use the terms "Chosinko" (Chosin River) and "Oryokko" (Yalu) interchangeably in reference to their visit. At the request of these men, Mitsubishi placed inquiries with various U.S. manufacturers for turbines, hydraulic governors, concrete buckets, cranes, diesel locomotives, head gates, concrete mixers, classifiers, vibrating screens, excavators, derricks, air compressors, diesel tractors, cableways. As these inquiries were very general and no orders resulted, they have not been treated in detail.

Inquiry for Steam Locomotives.

For Hei-Hoku Railway (Mitsui Inquiry T.E. 506). This railway line was to be constructed between Heijo, Korea and the site of one of the Yalu power stations. For this railway, Mitsui, in 1938, placed an inquiry with the American Locomotive Works for 6 ten-wheel steam locomotives. The inquiry was also sent to Skoda in Czechoslovakia.

Inquiry for Control and Switch Boards for the Suiho Power Plant.

(Mitsui Inquiry MF 4595.) In 1938 an inquiry for this equipment was placed with General Electric.

Inquiry for Cement Conveying System.

(Mitsui Inquiry MF 7621). In 1941 an inquiry was placed with the Fuller Company for two Kinyon cement conveying systems.

IV. Manchuria

A. Sungari River Project, Bureau of Hydroelectric Construction, Manchuria.

A dam and power plant for this project were being constructed about 24 kilometers above the city of Kirin. The plant, with an estimated capacity of 600,000 kilowatts, was to be completed by the end of 1944. Of the eight 70,000 kilowatt generators to be installed at this power plant, three were ordered in the United States, three in Germany, and two in Japan. (1)

Order for three 70,000 KVA Generators (Mitsubishi Order #8212).

A Mitsubishi order, dated April 27, 1939, for three 70,000 KVA Boulder Dam type water wheel generators was placed with the Westinghouse Electric Co.



The price for the generators was \$805,000.00. The order was placed by Mitsubishi to confirm a previous order for the same equipment placed with Westinghouse by Ryobi Denki Shokai of Tokyo on May 30, 1938. Mitsubishi was handling the financial aspects of the transaction, while Ryobi Denki handled the technical aspects.

The turbines to be used with the generators were to be made by Escher Wyss of Zurich, Switzerland. (11)

#### B. Kyohakuko Hydroelectric Station.

The Kyohakuko Hydroelectric Station was to form part of the Botanko River Power Project. This power project was to be located on the Botanko River, a branch of the Sungari River, and to have an output of 300,000 kw.

The Kyohakuko Hydroelectric Station was to be situated on the banks of the Kyohakuko Lake, a lake that is 90 square kilometers in area and located at the middle part of the Botanko River at an altitude of 296 meters. During four months of the year, the lake and the river are covered by ice approximately 1 meter in thickness. At the lower terminal of the lake, a weir, instead of a dam, was to be constructed to keep the water level at the designed full water level. At 6 meters below the full water level, a water tunnel, 6 meters in diameter and 2900 meters in length, was to be built leading to a water reservoir. From the reservoir, the water was to go to the penstocks (3.15 meters in diameter and 200 meters in length), and from the penstocks to the turbines.

The total output of the Kyohakuko Hydroelectric Station was to be 35,000 KVA. The power was to be transmitted to the Botanko and Nobuyoshi districts through 110,000 Volt transmission lines. Distribution was to be made to the Botanko district for a distance of about 80 kilometers, and to the Nobuyoshi district for a distance of about 195 kilometers. The Kyohakuko Station was to be in operation by the end of July, 1940. (12)

In August, 1938, Mitsui placed inquiries (MF 4550) with General Electric and I.P. Morris Company for the following equipment, for the Kyohakuko Hydroelectric Station:

- 2 20,000 kw. Water turbines
- 1 set of Oil Supply Equipment
- 2 Main valves
- 2 Pressure regulators
- 2 17,500 KVA generators
- 2 sets of Exciters and Automatic Volt Regulators

The Tokyo office of Mitsui reported that this inquiry was also sent to Hitachi, Shibaura, Dengyosha, Escherwyss, Mitsubishi Denki, A.E.G., Voith, Siemens Schukert, Deutsche Escherwyss, and Westinghouse. (13)

A letter written in February, 1939, stated ". . . the order has been given to the Mitsubishi Electric Co. due to the difficulty in getting exchange. We understand the total price was 2,200,000 yen, and shipment to be made in two years . . ." (14) Mitsubishi Confidential Reports indicate that during this period the Manchurian Government placed several large orders for generators and turbines with the Mitsubishi Electric Company. (15) It is quite possible that one of these orders was for the Kyohakuko Hydroelectric Station.

C. Kichirinshe Dam, Manchuria.

Inquired through Mitsubishi, of the Lidgerwood Manufacturing Co. for catalogues referring to cableways. (Inquiry #789 - 3/11/37.)

V. Korea

A. Chosin River Hydroelectric Power Co. (Chosinko Suiryoku Denko)

The Chosin River is a tributary of the Yalu River. It possesses a potential capacity of 320,000 kilowatts. The Chosin River Hydroelectric Power Co. was founded in 1933, and by 1937 it was completing the third power station on the Chosin River. Power from these stations was to be transmitted to Heijo and Keijo. (16)

Orders for Shovels. (Mitsubishi Order #9024 - 8/29/39 and Mitsui Order #00 1407 - 3/22/37.)

The Chosin River Hydroelectric Power Company placed two orders in the United States for shovels. One order, through Mitsubishi, for 2 type 352 electric shovels, was placed with the Marion Steam Shovel Co., and the other order, through Mitsui, was for 2 32-BE electric shovels manufactured by the Bucyrus-Erie Co. The price for the former was \$30,588.70, and for the latter \$25,468.05.

Inquiries.

Mitsubishi inquiry #1014 discusses the visit to the United States of a group of officials of the Chosin River Hydroelectric Power Co. (See discussion under section on Yalu Hydroelectric Power Development Co.)

Mitsui inquiry MF 7621 (1/14/41) placed with the Fuller Co. called for 2 Kinyon cement conveying systems for the Chosin Power Co.

B. Ryuko Substation.

Upon completion of the Chosin River power project, the Ryuko substation was to be part of the Chosin power system. The substation was to be built near Konan, Korea, at the Hongu Mill of the Korea Nitrogen Fertilizer Co. Until the transmission lines from the Chosin Power Station were completed, the Ryuko Substation was to be supplied with power from the existing Hongu Substation. Eventually power was to be received from the Chosin Station at 154 KV. (17)

Mitsui in December, 1938 placed inquiries with General Electric for the following equipment for the Ryuko Substation: three 60,000 KVA transformers, ten 8,000 KVA transformers, and ten mercury rectifiers. (OE 8073, 8074, 8075) Subsequently, the ten mercury rectifiers were ordered from the Fusi Electrical Manufacturing Co. (Fusi Denki Seizo) (18) but the disposition of the orders for the transformers is not indicated in the files.

VI. China

A. Rodai Industry (Rodai Kogyo).

Inquired, through Mitsubishi, of the Brew Woltman Co. for 1-3,000 to 10,000 KW steam turbogenerator and boilers suitable for use with the turbogenerator. An estimate was transmitted to Japan, and there the matter ended.

VII. Formosa

A. Formosan Electric Power Co. (Taiwan Denryoku K.K.)

In 1938, this company inquired, through Mitsui, of General Electric for the following equipment:

For Tensonpi No. 1 Power Station

2 Vertical Shaft Single Spiral Francis Turbines  
Effective Head - 70.5 m.  
H<sub>2</sub>O Quantity - 13.9m<sup>3</sup>/s  
Max. Output - 8,500 KW  
Speed - 300 r.p.m.

2 3-phase A. G. Generators  
Capacity - 8500 KVA  
Speed - 300 r.p.m.  
Voltage - 11,000 V.  
Frequency - 60 cy.  
Poles - 24

For Nanseiki Power Station

2 Turbines  
 Effective Head - 54 m.  
 Water Quantity - 14.5m<sup>3</sup>/s  
 Max. Output - 6700 KW  
 Speed - 300 r.p.m.

2 3-phase A. G. Generators  
 Capacity (Max.) - 6700 KVA  
 Poles - 24  
 Speed - 300 r.p.m.  
 Voltage - 11,000 V.  
 Frequency - 60 cy.

General Electric did not wish to offer a quotation on this inquiry.

VIII. Mongolia

A. Mongolian Electric Power Co. (Mokkyo Dengyo K.K.)

This company was established in 1938 in order to bring under central control the small power companies serving the towns of Kalgan, Tatumg, Houhe and Paotou (all located in occupied Northern China). Originally the company was capitalized at 6 million yen, and served only the four towns mentioned above. By the end of 1939, the company was capitalized at 18 million yen and the following power stations either had already been completed or were to be completed by October 1940:

<u>Power Station Location</u>	<u>Output</u>
Kalgan	1,000 kw.
Kouchuan	4,000 kw.
Hsiahuayuan	12,000 kw.
Paotou	1,000 kw.
Fengchen	400 kw.
Houhe	1,000 kw.
Salatsi	240 kw.
Tatumg	15,000 kw.

Several of these power stations were constructed for the purpose of supplying power to the Tatumg coal and the Hsiahuayuan coal and iron mines. (19)

Orders for Steel Rotor Shafts and End Rings (Mitsui Orders TO 105 and TO 106 - 4/5/40)

Mokkyo Dengyo ordered 2 steel rotor shafts and 4 steel end rings for use in generators being manufactured for it by Tokyo Shibaura Denki. Camden Forge Co. and the Heppenstall Co. each supplied 1 shaft and 2 rings. The total price for both orders was \$9,395.00.

Inquiries for Turbogenerators and Boilers. (Okura Inquiries 23448 and 23474 - Nov. 1939 and Jan. 1940)

Mokkyo Dengyo inquired of the Combustion Engineering Co. for the following:

- 1 10,000 kw. turbogenerating plant.
- 1 15,000 kw. " "
- 1 3,000 kw. " " (or 5,000 kw. generating plant as an alternative)
- 2 25 ton boilers
- 1 65 ton boiler

IX. Unspecified

A. Sanyo Chuo Hydroelectric Co. (Sanyo Chuo Suiden K.K.)

Inquiry for 2 Boilers (Mitsubishi Inquiry #1000 - .5/27/37)

This inquiry, which came to Mitsubishi Trading Co. directly from Mitsubishi Jukogyo K.K. (Mitsubishi Heavy Industry), Kobe, called for 2 high pressure boilers, complete with superheater, economisers, air heaters, pulverising and powdered coal firing equipment, soot blowers, fans, and other fittings. The purpose of these boilers was to supply steam for a 9400 kw. back pressure turbine in a Sanyo Chuo power house for which Mitsubishi Heavy Industry was constructing other equipment.

Sanyo Chuo's power station already had at least one 35,000 kw. turbine in operation. However, in order to increase efficiency, the 9400 kw. back pressure turbine was to be added to the power station's equipment.

The files contain a blueprint of the power station's general layout. This blueprint indicates that the power house building is 37 meters wide, 74 meters long, with the operating floor 8 meters above the ground. In the boiler room, which is 37 meters wide and 47 meters long, were two boilers. The two additional boilers called for in the inquiry were to be placed along side of two that were already installed. To the rear of the boilers were two turbines, one 35,000 kw. and the other smaller, but of unspecified power. The 9400 kw. turbine mentioned above was to be placed in front of the 35,000 kw. turbine and next to the smaller turbine.

N. Y. - #341

B. Kanko Electric Power Co. (Kanko Suiryoku Denki Kaisha)

Ordered from the Marion Steam Shovel Co., through Mitsubishi, 2 type 342 electric shovels priced at \$25,900.00. The shovels were shipped to Chemulpo. (Order 9023 - 9/29/39)

C. Kokai Electric Power Co. (Kokai Suiryoku K.K.)

Ordered from the Bethlehem Steel Co., through Okura, 4 steel shafts, priced at \$10,235.43. 2 of the shafts were for a 10,000 KVA water wheel generator and 2 were for an 18,000 KW water turbine. (Orders 12145 - 11/27/39 and 12150 - 11/30/39)

Footnotes

- 1) "The Industrialization of Japan and Manchukuo, 1930-1940", by Schumpeter, Allen, Gordon, and Penrose, (hereafter referred to as Schumpeter), pp. 415 - 416.
- 2) Mitsui file #TE 4038.
- 3) Mitsui file #MF 4438.
- 4) Mitsui file #TE 4439.
- 5) Letter 3/31/39 - Mitsui File #TE 4038
- 6) It is possible that these steam and feed pipes were for the Amagasaki power plant. In Sept. 1939 Okura placed an inquiry with the National Valve Co. (Okura Inquiry 23388) for such pipes.
- 7) Letter from Mitsubishi Shoji Kaisha, New York, to the National Valve Company, 11/3/39.
- 8) Letter from Okura, Tokyo, to Okura, New York, 2/5/37, in file 22545.
- 9) Mitsui Confidential Report for the Dairen Office, Last Half of 1937.
- 10) "Specification for Control Equipment and Switching Equipment for the Suiho Power Plant", Sept. 12, 1938. File MF 4595.
- 11) Letter from Westinghouse Electric Co. to Mitsubishi Shoji Kaisha, New York, 5/5/38.
- 12) "Specifications of Water Turbines and Generators for Kyohakuko Power Station", MF 4550.
- 13) Letter from Mitsui, Tokyo, to Mitsui, New York, 8/4/38.
- 14) Letter from Mitsui, New York to General Electric, 2/27/39.
- 15) Mitsubishi Confidential Reports dated December 1938, March, May, June, August, and October 1939.
- 16) Schumpeter, pp. 373-374
- 17) "Specification for Electric Equipment of the Kyuko Substation", 11/29/39 - OE 8073.
- 18) Letter from Mitsui, Tokyo, to Mitsui, New York, 10/16/39 - OE 8073.
- 19) "Glimpses of the East - 1939-1940" Section on China, p. 102.  
Published by Nippon Yusen Kaisha, Tokyo.

17

# JAPANESE FILES RESEARCH PROJECT

CONFIDENTIAL REPORT  
DEPARTMENT OF JUSTICE  
FILE 60-0-28  
NUMBER 3426

*5417/202*

*3 May 44*

*10050-212  
Copy!*

THESE REPORTS ARE PREPARED UNDER THE SUPERVISION OF THE ECONOMIC WARFARE SECTION, WAR DIVISION, DEPARTMENT OF JUSTICE BY MEMBERS OF THE STAFF OF THE WAR DIVISION, DEPARTMENT OF JUSTICE, AND THE ECONOMIC INTELLIGENCE DIVISION, FOREIGN ECONOMIC ADMINISTRATION.

---

---

---

---

---

---

---

---

---

---

1944