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DEPARTMENT OF JUSTICE
WAR DIVISION
ECONOMIC WARFARE SECTION

SUPPLEMENTAL REPORT ON SOME SHIBAURA ENTERPRISES

(27 December 1943)

Submitted by: George Horowitz
Economic Intelligence Division
Foreign Economic Administration
Washington, D. C.

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Economic Warfare Section
War Division
Department of Justice
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Confidential Report
27 December 1943 (Report #250)
Re: Supplemental Report on Some Shibaura
Enterprises
Submitted by: George Horowitz
Economic Intelligence Division
Foreign Economic Administration
Washington, D. C.

SUPPLEMENTAL REPORT ON SOME SHIBAURA ENTERPRISES

Introduction

A. Scope of the Report

This report covers:

1. The negotiations and agreement in 1939 by UNITED ENGINEERING & FOUNDRY COMPANY of Pittsburgh, Pa. and SHIBAURA ENGINEERING WORKS LTD., with head offices at 10 Yurakucho 1-chome, Tokyo, Japan, to build a rolling mill factory in Japan; the establishment by them of a joint enterprise to that end, SHIBAURA KYODO KOGYO K.K. (SHIBAURA UNITED ENGINEERING COMPANY, LTD.) of Japan; and the extent to which the plans were carried out.
2. The confidential Agency Agreement concluded 18 December 1939 between MITSUI & COMPANY, as manufacturer's representative, and TOKYO SHIBAURA ELECTRIC COMPANY, also known briefly as TOSHIBA, (the "General Electric" of Japan) as principal, covering the latter's heavy electrical products.
3. MITSUI'S confidential list of major stockholders in TOKYO SHIBAURA ELECTRIC COMPANY (TOSHIBA) as of 28 December 1939, translated from the Japanese.
4. Orders and inquiries in the United States for machinery, equipment and supplies on behalf of SHIBAURA in addition to data previously submitted in the reports mentioned below.

It is based on:

1. Material in Japanese and in English contained in the New York files of the four principal Japanese trading companies in the possession of the Alien Property Custodian:

MITSUBISHI SHOJI KAISHA
 MITSUI BUSSAN KAISHA (MITSUI & CO., LTD.)
 ATAKA & COMPANY, LTD.
 OKURA & COMPANY, LTD.

2. The files of the IMPERIAL EXPORT COMPANY, 44 Whitehall Street, New York, N.Y., an American concern.
3. Secondary and minor sources as indicated in the notes.

It supplements and in places refers to some of the earlier reports relating to SHIBAURA enterprises, viz:

1. Report by Robert A. Nitschke, SHIBAURA ENGINEERING WORKS, TSURUMI, 2 March 1943, Dept. of Justice, #2387, Chicago.
2. Report by Robert A. Nitschke, JAPANESE MACHINE TOOL INDUSTRY, HISTORY AND DEVELOPMENT, 30 April 1943, Dept. of Justice, #2830, Chicago.
3. Report by Kline and Collins on SHIBAURA UNITED ENGINEERING, 3 April 1943;¹ Securities & Exchange Commission, N.Y.
4. Report by Don H. Banks on SHIBAURA ENGINEERING WORKS, 3 August 1943;² Dept. of Justice, #3177, NY-204.
5. Report by A.S.B. Nolting on TOKYO SHIBAURA ELECTRIC COMPANY, JAPAN, 23 November 1943.³ NY-#236, Dept. of Justice.

These reports are described in the Reference Material or in the notes as indicated.

B. The Various Companies: Names and Dates

The central facts to keep in mind are that:

1. By merger on 1 July 1939
 TOKYO ELECTRIC COMPANY † SHIBAURA ENGINEERING WORKS
 = TOKYO SHIBAURA ELECTRIC COMPANY
 (TOKYO SHIBAURA DENKI, also called TOSHIBA)
2. A subsidiary of TOKYO ELECTRIC COMPANY, before said merger, known as TOKYO ELECTRIC RADIO COMPANY (TOKYO DENKI MUSEN K.K.) was "raised" to the name of TOKYO ELECTRIC COMPANY (TOKYO DENKI K.K.) after the merger.
3. After the merger, two divisions ("Shisha") were created in TOSHIBA, thus:

| | |
|-------------------------------|-----------------------------------|
| <u>Matsuda Division</u> | <u>Shibaaura Division</u> |
| former TOKYO ELECTRIC COMPANY | former SHIBAURA ENGINEERING WORKS |

Thus we have chronologically:

| Changes of Name | |
|------------------------------|-----------------------------|
| Before 1 July 1939 (from) | After 1 July 1939 (to) |
| Tokyo Electric Company | Toshiba (Matsuda Division) |
| Shibaura Engineering Works | Toshiba (Shibaura Division) |
| Tokyo Electric Radio Company | Tokyo Electric Company |

(Summarized from Nolting Report³)

PART ONE

THE ESTABLISHMENT OF SHIBAURA KYODO KOGYO⁴

A. The Negotiations

In October, 1938 negotiations began between UNITED ENGINEERING & FOUNDRY COMPANY of Pittsburgh, Pa. and MITSUI & COMPANY, LTD. for the establishment of a machine shop and factory in Japan to manufacture rolling mill machinery, which brought to a head discussions that had been going on for two years then past.

Simultaneously, UNITED ENGINEERING was treating, also, with H. A. BRASSERT & COMPANY, 60 East 42nd Street, New York, N. Y. (Mr. Ives). This is the company which had sent a mission to Manchuria in 1938 to make a survey of iron and steel facilities there.⁵ Then, in 1939 they were commissioned by Yoshizuke Aikawa⁵, President of the MANCHURIAN DEVELOPMENT CORPORATION (MANGYO) to negotiate with UNITED for the building of a rolling mill factory in Manchuria. These latter negotiations will be discussed below.

1. Suggested Participation of Japanese Steel Companies

Meanwhile, on 19 October 1938, the Tokyo office of MITSUI cabled to its New York office:

"Government has decided to increase present annual production of steel 6 million metric tons up to 12 million within 4 years for which considerable amount of rolling mill machinery is required. In order to save the import as much as possible, the Government is considering a policy for manufacturing rolling mill machinery in Japan."

This was amplified by a letter of 19 October to George T. Ladd, President of UNITED ENGINEERING & FOUNDRY COMPANY, by S. Kitamoto of MITSUI'S New York office. It read in part:

"Our people believe that enterprise suggested by you cannot be accomplished successfully without the support of NIPPON SEITETSU KAISHA* which has practically a controlling influence in the steel industry in Japan. Therefore, they think it best to arrange with NIPPON SEITETSU KAISHA to let them take the initiative and try to establish a new organization including SHOWA STEEL WORKS, SUMITOMO, FURUKAWA, and etc."

It was further suggested that Ladd suspend dealing with BRASSERT & COMPANY for the time being.

To this UNITED replied on 7 November, C.M. Muchnic to H. Yoshida (manager of MITSUI'S New York office) that they objected to having the steel companies as stock holders in the proposed rolling mill factory since these very companies would be the chief customers for the rolling mill equipment to be manufactured. If the principal steel companies controlled the enterprise they would fix the prices to themselves which might make the deal unprofitable. Provided control of the new company would remain in the joint stock ownership of UNITED and MITSUI, Mr. Ladd had no objection to the participation in the enterprise of NIPPON SEITETSU KAISHA, SHOWA STEEL WORKS, SUMITOMO, FURUKAWA, etc. through stockholding by individual officers of the various companies, but not through the participation of the companies themselves.

* Japan Iron Manufacturing Co., Ltd., the "U. S. Steel" of Japan.

He pointed out, moreover, that the control and majority ownership of NIPPON SEITETSU KAISHA was with the Japanese Government and that probably the same could also apply to SHOWA STEEL WORKS.⁵ If these two corporations should have a large ownership in the new enterprise, and if any controversy should arise between UNITED and other private stockholders of the company, its adjudication could not be referred to courts of law because a government may not be sued without its consent.

The negotiations centered upon the sale of one of the complete plants operated by UNITED ENGINEERING and its shipment and re-erection in Japan. This was the factory located at Wooster*, Ohio.

2. Shibaura's Estimate of the Wooster Plant

Towards the end of November, MITSUI withdrew as the proposed associate, suggesting in its place SHIBAURA ENGINEERING WORKS; and MITSUI-Tokyo cabled on 1 December that SHIBAURA wanted to know the price of the complete Wooster plant - lock, stock, and barrel - building, machinery and equipment.

On 8 December, UNITED (C.M. Muchnic) wrote that after a visit to the Wooster plant to be made by Messrs. Kitamoto and Nobu of MITSUI and Fujishima of SHIBAURA, arrangements would be made to furnish approximate estimates for shipment of plant and building.

The inspection took place and it was then arranged that K. Yamaguchi, President of SHIBAURA ENGINEERING WORKS, would come to the United States to complete the deal. In a letter, 22 December 1938, MITSUI-New York to MITSUI-Tokyo, Kitamoto reported that Fujishima found the Wooster plant a very well balanced machine shop. He confidentially expressed the opinion that

"... this plant as it is would have a value of Y 7,000,000. Approximately 1/3 of the machine tools**are new and about 1/3 are quite old but very well balanced. However, in case this equipment is transferred to Japan, more additional machine tools would be required such as gear generator for high speed gears, roll grinders, etc."

* Not "Worcester" as has appeared in other reports

** See Appendix II for list of machines.

3. The BRASSERT-MANGYO (Aikawa) Negotiations:

Meanwhile, the negotiations with BRASSERT were also going on. On 28 November, Mr. Ladd learned that BRASSERT'S customer intended to erect the plant in Manchuria. He thereupon declined to negotiate further with BRASSERT and concentrated his interest on the MITSUI-SHIBAURA deal.

Yet, as late as 21 January, 1939, BRASSERT was still trying, as UNITED'S letter of that date attests. (C.M. Muchnic to H. Yoshida, MITSUI-New York):

"Representatives of BRASSERT & CO. who were in Pittsburgh this week advised that the original idea of locating a rolling mill manufacturing plant in Manchukuo has been changed to the Osaka districts. The BRASSERT proposition is on a very much larger scale involving a complete plant, including cast iron and cast steel foundries, forging plants, etc. They are preparing estimates of the cost of this plant and the complete enterprise will include the Wooster plant which we are also offering to the SHIBAURA ENGINEERING WORKS. If the latter should take quick action, it will, of course, preclude our furnishing the plant or the engineering cooperation to the Aikawa interests."

In February, Aikawa was still seeking some participation in the enterprise as evidenced by the following cable which he sent direct to Yamaguchi:

"Since last summer we have been working with BRASSERT & CO., Chicago, for the establishment of a rolling mill factory in cooperation with UNITED ENGINEERING CO., independent of HITACHI. At UNITED'S request, we are inviting MITSUI to act as our buying and shipping agent... We have been reporting to the authorities fully the course of events and with their understanding we are now selecting land. In these circumstances, we are disturbed to hear that you are carrying on certain negotiations for the same equipment. If so, we earnestly ask you to leave us free to conclude the deal at the soonest possible moment.

Otherwise serious complications might arise. We are open to discuss possibilities of collaboration with you if you desire."

Yamaguchi rejected Aikawa's proffered collaboration. Yet he was uneasy as indicated by his cable from New York, 10 February 1939, to MITSUI-Tokyo:

"Transmit following telegram to Kubo Tsumori*. BRASSERT informed UNITED that Aikawa already has obtained government permission for the establishment of a rolling mill and a new company of Y 50,000,000. However, we believe firmly that they have obtained simply an understanding instead of permission from only a part of the government. Ascertain at once whether or not permission was granted."

B. The Contract**: Its Main Provisions

But when the messages just quoted were sent, the deal had already been closed. In the first week of February, letters of agreement had been exchanged between Ladd and Yamaguchi substantially to the effect of what was later embodied in the formal contract of 9 March. That contract, apparently drawn by Patterson, Crawford, Arensberg and Dunn, First National Bank Building, Pittsburgh, Pa. (where UNITED'S office is located) is summarized below. Also, Charles Arensberg, evidently of that firm, was present on 8 March at the "closing" which took place at the exclusive Lotus Club in New York where Yoshida tendered a "victory" luncheon to the dozen or more executives and counsel.

The contract was executed on 9 March 1939 for SHIBAURA ENGINEERING WORKS by K. Yamaguchi and S. Noguchi and for UNITED ENGINEERING & FOUNDRY COMPANY by George T. Ladd and K. C. Gardner.

Its main provisions were:

1. The New Company - Capitalization

For the purpose of acquiring the Wooster, Ohio plant of UNITED ENGINEERING, erecting it and beginning operations in Japan, SHIBAURA was to organize a new Japanese corporation with the consent and

* General Manager of SHIBAURA

** See Appendix I

approval of the Japanese Government, to be called SHIBAURA KYODO KOGYO K.K. (SHIBAURA-UNITED ENGINEERING COMPANY, LTD.) Its capital was to be Y 16,000,000, consisting of 320,000 shares of Y 50 each.

Shibaura was to pay Y 8,160,000 in cash for 51% of the stock, 163,200 shares. The balance, 49%, was reserved for UNITED ENGINEERING.

2. Financial Clauses

In payment for the Wooster plant, UNITED ENGINEERING was to receive 56,800 shares valued at Y 2,840,000 and an additional 100,000 shares were set aside for future delivery to UNITED at the rate of 10,000 shares per year, which block of stock was to be in payment of future engineering services.

At the expense of the new company, fixed at \$200,000. and guar- by UNITED to be no more, UNITED was to recondition, dismantle, box and pack the tools for ocean shipment, delivering its Wooster plant FAS New York.

If, for any reason whatever, the new company could not take delivery and shipment from New York to Japan, SHIBAURA would pay to UNITED as liquidated damages \$1,000,000 in the United States, even if such failure might be due to war or governmental embargo. If, however, such "force majeure" occurred before the dismantling of the plant at Wooster and shipment to New York, UNITED was to retain said \$200,000. to be paid for removal expenses and SHIBAURA was released of the \$1,000,000 damages above mentioned.

3. Cooperation to be Furnished by UNITED

UNITED was to send experts to Japan as may be requested and available to assist in the proper erection and operation of the plant; but traveling expenses, salaries, living expenses of such personnel would be paid by the new company.

For 12½ years UNITED would furnish to the new company for its use only in Japan, China and Manchukuo but not elsewhere, blueprints, drawings, and etc. of rolling mill machinery designed and built or which might be designed and built by UNITED, together with engineering information, technical data, etc. as requested.

New drawings for the new company would be at its expense, at cost plus 10%; but UNITED would not be required to furnish drawings or information that might be prohibited by the United States.

UNITED would inform the new company of all inquiries received directly from Japanese territory and would cooperate with respect to patent rights within said territory. It would, during the period of the agreement, inform the new company of future inventions and patent rights in the United States and grant to it licenses thereunder upon prompt request. UNITED would cooperate in prosecuting infringers of patent rights licensed to the new company.

UNITED would permit engineers of the new company to enter its plant to afford them an opportunity to become acquainted with manufacturing methods, etc.

UNITED would not enter into any similar agreement with any other firm or grant any competitor any license for Japanese territory during the term of the agreement.

4. Safeguards for UNITED'S Protection

There was to be no preferred stock, etc, created without UNITED'S consent and UNITED was to have the right to subscribe to new stock proportionately. UNITED'S right to receive stock in the new company and the dividends were not to be affected by any law of the United States preventing UNITED from furnishing drawings, blueprints, information, etc.

UNITED was to have at least three directors on the Board of the new company.

The new company was not to subcontract any portion of the contract without UNITED'S consent and would give to UNITED the opportunity to perform in the United States part of any large contract that the new company might obtain.

The new company would inform UNITED of any inventions or improvements which it or its employees might make and would, upon request, assign to UNITED patent rights therein for the United States and licenses thereunder for other countries.

If the rights of UNITED were sequestered, or if for any reason not recognized, or if UNITED were denied receipt of dividends in American money, it would not be required to furnish drawings, information, etc.

5. Machine Tools and Equipment Covered

The machines of the Wooster plant sold and delivered under the contract consisted chiefly of 100 or more machine tools as follows:

| | |
|----|-------------------------|
| 10 | Planers, mostly Pond |
| 28 | Lathes, various makes |
| 3 | Horizontal boring mills |
| 6 | Vertical boring mills |
| 13 | Drill presses |
| 5 | Shapers |
| 4 | Slotters |
| 1 | Key setter |
| 6 | Milling machines |
| 8 | Grinders |
| 10 | Gear planers |
| 3 | Presses |
| 1 | Bolt cutter |
| 12 | Power cranes |

Several smaller tools and accessories were included.

In addition eight various machine tools and certain miscellaneous items including structural steel from other plants of UNITED ENGINEERING were covered by the contract.

The complete list is in Appendix II.

C. Beginning of Operations and UNITED'S Continued Aid

Letters in Japanese and other correspondence in the MITSUI files indicate that the SHIBAURA-UNITED plant was not in operation on 1 July 1939 but that by the end of the year it seemed to be in a position to produce. This is borne out by the acceptance of an order by SHIBAURA-UNITED for a wire rod mill for the KAWASAKI DOCKYARD. The order was placed on 1 December 1939 for a mill with a capacity of 30,000 tons per year. The delivery was to be made 15 months after date. The price was Y 632,700.

Detailed specifications for the mill were furnished by UNITED ENGINEERING in a proposal of 23 August 1939 which was used in turn by SHIBAURA-UNITED in the preparation of its own proposal.

"It is probable that the main purpose of UNITED ENGINEERING'S quotation was to supply this information to SHIBAURA-UNITED and not to secure an order for UNITED ENGINEERING".⁷

Besides giving estimates and proposals for particular jobs and inquiries received in Japan by SHIBAURA-UNITED from Japanese customers, UNITED ENGINEERING sold complete sets of prints and drawings to its affiliate. (For two such examples, see Part IV, D, Orders No. 11005 and 11006).

According to an officer⁸ of UNITED ENGINEERING, their engineers who had gone to Japan to help in erecting the plant stayed until the middle of 1941. They left the factory completely set up ready for operations. UNITED, moreover, furnished the Japanese company complete drawings, blueprints, plans and instructions required to enable them to produce rolling mills; and the factory had sufficient man-power.

By 1941, moreover, SHIBAURA-UNITED had obtained between 10 and 15 million Yen worth of orders for rolling mill equipment. Due, however, to the difficulty of obtaining the special forgings and castings required for rolling mill machinery, said informant stated that no such machinery was actually produced before Pearl Harbor. It was his opinion that due to the continued shortage of such forgings and castings, which shortage he thinks has been aggravated by Japan's entry into the Global War, SHIBAURA-UNITED had not yet made any rolling mills at the time of the interview. (December, 1943). He thought that the factory was now being used to make machine tools and "odds and ends". The soundness of these opinions is open to question.

PART TWO

THE MITSUI-TOSHIBA AGENCY AGREEMENT

Note: For a general description of TOSHIBA (TOKYO SHIBAURA ELECTRIC COMPANY) with its subsidiaries, branch factories, and other ramifications, see the report on this company by A.S.B. Nolting.

Two documents in Japanese, found in the MITSUI files, entitled "Contract" and "Memorandum" of 18 December 1939, set forth the terms of renewal of the Agency Agreement that had existed for over 25 years between MITSUI and SHIBAURA with respect to electrical machinery. In two attachments, annexed to the documents, are listed the products and the customers covered by the Agreement.

The full text of the Attachments and a summary of the Agreement are given herein from translations made by Lloyd Kim of the Office of Consorship as revised by Dr. Frederick M. Mossner of the Foreign Economic Administration.

A. Summary of the Contract and Memorandum between TOSHIBA and MITSUI & CO., dated 18 December 1939, (marked "CONFIDENTIAL")

In order to continue the cooperation begun as far back as 1913 between TOKYO SHIBAURA ELECTRIC COMPANY (called TOSHIBA) and MITSUI BUSSAN KAISHA K.K. (called MITSUI), and due to the development of new articles in the market and to the more stringent government regulations in effect because of the "Asia Prosperity Plan", the parties have agreed to revise their agreement as follows:

1. TOSHIBA appoints MITSUI sole agent of its manufactured products and those of its subsidiaries as listed in Attachment One, but excluding:
 - (a) Instruments in the field of wireless
 - (b) Parts or accessories of the machines listed in Attachment One.
 - (c) Consumer goods

2. With respect to the Japanese Empire (excluding Korea), described as District A, the agency is limited to the firms listed in Attachment Two. As regards customers therein listed, if TOSHIBA or its agent is acting as the sole agent of such third party, TOSHIBA will notify MITSUI and MITSUI will refrain from competing.

With respect to any other prospects in District A, TOSHIBA and MITSUI will confer in order to arrive at a mutually satisfactory arrangement. As regards the rest of the world (Korea, Kwantung Province, Manchukuo, China, and other foreign countries) described as District B, although Mitsui is to be sole agent for TOSHIBA, if direct contracts be necessary between TOSHIBA and the customer, the parties agree to confer for the purpose of arriving at a satisfactory adjustment; and in the event of a direct sale by TOSHIBA, its prices will not be lower than the price quoted by MITSUI.

3. The parties will not compete with one another or with their agents and will consult with reference to customers in District A, not herein mentioned; but TOSHIBA shall have the final word if no agreement can be reached. The parties agree to cooperate in every respect to promote sales, including the sending of agents to MITSUI'S branch offices at TOSHIBA'S expense.
4. In the past, due to special circumstances, CHIYODA KUMI K.K. (called CHI) has been selling small quantities to certain customers in Attachment Two as indicated by (Chi) alongside their names. Such CHI sales will not be affected by this agreement so long as they do not interfere with other transactions between MITSUI and the same customers.
5. With respect to sales to UCHIKAWA ELECTRIC COMPANY, HANSHIN ELECTRIC RAILWAY COMPANY, and HIROSHIMA ELECTRIC COMPANY, MITSUI and CHIYODA will continue to handle the business together as in the past.
6. The parties will arrive at a separate agreement with respect to the manufacture by TOSHIBA, and their sale, of foreign products obtained for TOSHIBA through MITSUI'S efforts.
7. With respect to the products for which MITSUI is appointed exclusive agent in District B, TOSHIBA will make no contract with third parties.
8. Prices including discount and rebates will be decided by TOSHIBA.

9. TOSHIBA will pay MITSUI a commission as follows: for sales in District A, 2%; for sales in District B, 3%.

If, due to special conditions, commission as specified is not payable to MITSUI, they may add proper charges and commission to the sales price.

10. This contract shall be for a period of five years from the date hereof and six months before its expiration, the parties shall confer for the purpose of a further extension.

B. The Attachments to the Agency Agreement

1. Products Covered (Attachment One - as translated from the Agency Agreement)

Generators for Water-Wheels (water-mills)
Generators for turbines
Alternating and direct current generators
Frequency converters
Regulators
Rotary converters
Motor generators
Transformers (excluding the Standard Model Transformer less than 50 K.V.A.)
Mercury rectifiers (excluding those which use rectifier tubes made of glass)
Induction-potential regulators (or induction-voltage regulators)
Alternating current generators (excluding those Standard Generators and Single-phase Generators with less than 100 HP)
Direct current generators
Generators for street cars and controlling equipment
Electric locomotives
Switchboards, distribution instruments, safety and controlling devices
Electric furnaces
Condensers
Electric rudder raisers*, electric winches, electric capstans, electric windlass for ships
Magnetic separators*

* Translator uncertain as to exact meaning.

2. Customers Covered (Attachment Two)

Attachment Two of the Agency Agreement contains a list of customers with respect to whom MITSUI had the exclusive representation for the sale of TOSHIBA products. These customers include both private concerns and governmental departments, agencies and sub-divisions, running to 234 names.

Notations against many of the customers' names indicate that special arrangements existed with respect to them as follows:

"Choku" means that TOSHIBA might make direct sales to such customers.

"Gunchoku" indicates that TOSHIBA sold directly to the Army agency.

"Chi" indicates customers to whom CHIYODA KUMI K.K. might also sell as provided in paragraph 4 of the Agreement.

"Chi" and "Mitsu" together refers to the co-operative sales that might be effected by that company and Mitsui together as specified in paragraph 5 of the Agreement.

Attachment Two is set forth in full in Appendix III.

C. Sales by MITSUI as agent for TOSHIBA

1. Some details of 1940 sales

From confidential reports in Japanese of the Engineering Department of MITSUI of business done in 1940 by the Company's various offices, the following figures were obtained of sales made on behalf of TOSHIBA.

OSAKA Office Reported for the First Half of 1940
under date of 20 May 1940

| <u>Customer</u> | <u>No.</u> | <u>Product</u> | <u>Price (Y)</u> |
|-----------------|------------|---------------------------|------------------|
| Sumitomo Metals | 1 | X-ray examining apparatus | 12,075 |
| " " | 1 | Electric furnace | 21,550 |
| " " | 1 | (?) type electric furnace | 63,000 |

| <u>Customer</u> | <u>No.</u> | <u>Product</u> | <u>Price (Y)</u> |
|--|------------|--|------------------|
| Sumitomo Metals | 100 | Static condensers | 10,000 |
| " " | 500 | Hub preserving rings (?) | 32,500 |
| " " | 5,000 | Governors low (?) plate power rings | 10,000 |
| " " | 16,000 | Oil ? bearings | 79,040 |
| " " | 16,000 | ? | 376,000 |
| Mitakara (or Sambo) Drawn Copper Mfg. Co. | 1 | Electric furnace | 25,400 |

MUKDEN Office Reported for Second Period of 1940
under date of 2 November 1940

(Purchased through Tokyo Office)

| <u>Customer</u> | <u>No.</u> | <u>Product</u> | <u>Price (Y)</u> |
|-----------------------------------|------------|--------------------------|------------------|
| Showa Steel Works | 2 | Electric locomotives | 492,600 |
| " " " | 194 | 3-phase induction motors | 468,490 |
| " " " | 217 | 3-phase induction motors | 1,182,321 |
| Honkeiko Soot (?) Iron Company | 1 set | Power station equipment | 141,916 |
| Manchuria Light Metals Company | 2 | Electric furnaces | 196,794 |

Another table in this report gives a summary by "Maker" of totals of products sold. Therein appears the following:

| <u>Bought through Tokyo Office</u> | <u>Product</u> | <u>Yen</u> |
|--|----------------------|------------|
| Tokyo Shibaura Electric Co. (Shibaura Division) | Electric locomotives | 2,911,220 |
| Tokyo Shibaura Electric Co. (Matsuda Division) | Refrigerator parts | 546 |

DAIREN Office Reported for the First Period of 1940
under date of 26 April 1940

1. "Winding apparatus for the Lung-Fung Hai (?) Mine, which is an important part of the South Manchuria Railway, Fushun Coal Mine plans for increased production, was bought largely from Tokyo Shibaura Electric (Shibaura Division), Tokyo. Ishikawajima and Takaoka group have jointly interested themselves in this."
2. "Of the twenty-two 85-ton electric locomotives bought by the South Manchuria Railway Company ... five from Shibaura, it was decided to buy through us (Y 1,223,500)."
3. In addition, it is reported that Takahashi Company bought from Tokyo Shibaura (Matsuda Division) 300 parts for electric sweepers for Y 17,100.

GENERAL STATISTICS

In a further confidential report of MITSUI'S Engineering Department, of a general nature, there appears in Appendix A the following: "Table of Important Contracts During First Period of 1940" for TOSHIBA products:

| <u>Buyer</u> | <u>No.</u> | <u>Product</u> | <u>Delivery Date</u> |
|-------------------------------------|------------|--|----------------------|
| Japan Nitrogen | 16 | Turbines and generators Transformer, etc.** | Dec. '41 Aug. '41 |
| Japan Iron | | Electric locomotives, etc** | A.S.A.P.*** |
| Mitsui Mining | 3 | Transformers, etc. | Mar. '41 |
| Honkeiko Phosphoric Iron Company | 50 | Electric locomotives, etc. | July, '41 |
| Manchuria Electric Industry | 14 | Transformers, etc. | Dec. '40 |
| Showa Steel Works | 2 | Electric locomotives | Oct. '40 |
| Hanshin Express (Kobe-Osaka RR) | 18 | Electrically driven governors | 2 1/2 months |

* The other locomotives were to be bought: 6 from Kawasaki; 5 from Hitachi; and 6 from Mitsubishi.

** Number of units not indicated in original

*** A.S.A.P. = as soon as possible

| <u>Buyer</u> | <u>No.</u> | <u>Product</u> | <u>Delivery Date</u> |
|-----------------------------|------------|------------------------------------|----------------------|
| Manchuria Sumitomo | 1 | Mill motor | A.S.A.P.* |
| Oriental Rayon | 7,000 | "Botto" (?) motors | A.S.A.P.* |
| Chiyoda | | Governor** | April, '41 |
| Sumitomo Metals | 16,000 | ? bearings (?) | |
| Daide Steel Mfg. Company | | Ajax high frequency furnace, ** | Jan. '40 |
| Sumitomo Metals | | Electric furnace** | July '41 |

The table includes also the following items.
from SHIBURA-UNITED.

| | | | |
|-------------------------------|---|---|----------|
| Kawasaki Heavy Industry | 1 | Wire mill aluminum equipment (?) | Oct. '40 |
| Japan Light Metals Company | | Aluminum mixing and melting furnace ** | <u>?</u> |

In a "Report of Engineering Department of Export Conditions" of MITSUI & CO., dated October, 1940, sales of TOSHIBA products made outside of Japan proper were given as follows:

| <u>To</u> | <u>Product</u> | <u>Price (Y)</u> |
|-----------|----------------------|------------------|
| Mukden | Electro motor | 5,620 |
| " | Transformer | 1,720 |
| " | Electro motor | 2,640 |
| " | Magnetic coil | 2,260 |
| " | Lightening arrester | 280 |
| Hsinking | Lightening arresters | 14,590 |
| Peking | Electro motor | 5,870 |
| Tsingtao | Transformer, etc. | 602,300 |

* A.S.A.P. = as soon as possible

** Number of units not indicated in original

2. Total Sales for Years 1936 - 1940

Statistics, in the MITSUI files, translated from the Japanese, indicate that MITSUI, as exclusive agent, effected sales in Yen during the five year period 1936 - 1940 as follows:

| | <u>1936</u> | <u>1937</u> | <u>1938</u> | <u>1939</u> | <u>1940</u> |
|--|-------------|-------------|-------------|-------------|-------------|
| [Shibaura Engr. Works*] | 16,107,598 | 26,484,285 | 34,430,495 | -- | -- |
| Tokyo Shibaura Electric Co. * | -- | -- | -- | 51,716,636 | 51,789,142 |
| Shibaura Matsuda Industry Company (Special Alloy) | 239,953 | 704,267 | 1,376,580 | 2,659,324 | 3,197,385 |
| Ishikawajima-Shibaura Turbine Co. | 342,646 | 6,804,821 | 11,529,934 | 5,151,618 | 10,852,255 |
| Shibaura Tool | -- | -- | -- | -- | 1,006,068 |
| Shibaura-United Engineering Co. | -- | -- | -- | -- | 5,782,424 |
| Tokyo Electric Co. (formerly Tokyo Radio Electric Co.)** | 60,981 | 699,084 | 675,809 | 175,318 | 1,445,670 |

* Sales for the years before 1939 appear in the Japanese original for "Tokyo Shibaura Electric Company." This is obviously a clerical error since there was no such company before July 1, 1939. The figures probably indicate sales made for Shibaura Engineering Works, Ltd. of which company Mitsui had been the agent before its merger with Tokyo Electric Company.

** As explained in the Introduction, Tokyo Electric Radio Company was changed to Tokyo Electric Company after the merger on July 1, 1939 of Shibaura Engineering Works with the original Tokyo Electric Co.

PART THREE

MAJOR STOCKHOLDERS OF TOSHIBA

A document marked "Confidential" found in the general correspondence files of MITSUI & CO., contains a list of the larger stockholders in the merged company, owners of 1000 shares or more. It lists 146 names out of a total of 3,389 stockholders. These 146 held 1,649,273 shares out of a total of 1,740,000 outstanding after the merger. The two largest stockholders were GENERAL ELECTRIC with 570,574 shares and MITSUI GOMEI with 236,026 shares. The holdings of the third largest stockholder, listed as "TOKYO SHIBAURA DENKI", 143,500 shares, were apparently cancelled as treasury stock according to notations at the beginning and at the end of the document.

The complete list is set forth in Appendix IV.

Two earlier lists setting forth the more important stockholders of SHIBAURA ENGINEERING WORKS and of TOKYO ELECTRIC before their merger into TOSHIBA are in Nolting Report³ at page 82.

Exhibit A of that report is a table titled "Tokyo Shibaura Electric Co., Ltd.--History of Capital Stock Changes Showing International General Electric Company, Inc., Investment." This table gives figures through November 1941 and is thus, as far as the International General Electric Company interest is concerned, of later date than the list included in this report in Appendix IV.

PART FOURORDERS AND INQUIRIES FOR VARIOUS SHIBAURA PLANTS*A. The Jinsen (Zinsen) Factory - "Second Expansion" (Korea)

From some MITSUI correspondence in Japanese (translated by Lloyd Kim, Office of Censorship) it appears that the following three machines were ordered for "Jinsen Factory, Shibaura Branch, Tokyo Shibaura Electric K.K...." for the 2nd Expansion of the Jinsen Branch Factory."

| Mitsui Order No. | Date | Manufacturer | No. | Product | Price |
|---------------------|-------------|---|-----|---|-----------|
| T.O.3935 | 29 Oct. '40 | Barret Machine Tool Company, Leadville, Pa. | 1 | #2 horizontal boring machine, having a 5" diameter of boring bar x approximately 141-3" long, 20" height from top of bed to center line of boring bar, full 48" feed and 48" capacity. Machine provided with power quick return to boring bar in either direction through a 2 HP motor, also arranged with an 8-change speed box with texrope drive between the main 10 HP motor and machine. Machine complete with electric motor and standard equipment. | 10,250.00 |
| | | Barret Machine Tool Company | 1 | #3 horizontal boring machine having a 6" diameter of boring bar x 16'2" long, 24" height from top of bed to center line of boring bar, 60" feed and 60" capacity. Machine complete with electric motors and all standard equipment. | 12,500.00 |

(Note: These orders are in addition to the orders listed in the Banks' report² (Part 1, pp. 1-12) which are of the earlier period of the Jinsen factory. This tends to explain the expression "second expansion.")

*All the data in Banks report² has been reexamined and rechecked in the source material. The orders and inquiries listed in Part Four are new material, additional to Banks' information.

| Mitsui Order No. | Date | Manufacturer | No. | Product | Price |
|---------------------|-------------|------------------------------------|-----|---|----------|
| T.O. 3935 Cont'd | 29 Oct. '40 | Norton Company Worcester, Mass. | 1 | 10"x48" latest type C plain grinding machine, hydraulic table traverse, motor drives, machine complete with average equipment. | 8,011.35 |
| | | | | <u>Electrical Equipment</u> | |
| | | | 1 | Wheel drive - 10 HP, 1800 rpm, 3 phase, 60 cycle, 220 volt motor | |
| | | | 1 | Table traverse - 2 HP, 1800 rpm, AC, 3 phase, 60 cycle, 220 volt motor | |
| | | | 1 | Headstock drive - $\frac{5}{4}$ HP adjustable speed, DC, 220 volt motor. | |
| | | | | <u>Extra Equipment</u> | |
| | | | 1 | Steady rest, two bearing hand operated | |
| | | | 1 | Radial truing device, table type | |
| | | | 1 | Wheel spindle reciprocating attachment | |
| | | | 1 | Spare wheel sleeve | |

The NORTON machine and equipment is also mentioned elsewhere (E.O. 3255, M.F. 3839) where it is stated that "the State Department refused an export license therefor." It may be assumed, therefore, that the two BARRET machines also were denied export, since there is no evidence that they were ever shipped.

B. SHIBAURA ENGINEERING WORKS (SHIBAURA SEISAKUSHO K.K.)*1. Inquiries which did not result in ordersMITSUI INQUIRIES

| <u>Inquiry No.</u> | <u>Date</u> | <u>Manufacturer</u> | <u>No.</u> | <u>Product</u> | <u>Price</u> |
|--------------------|-------------|---|------------|---|--------------|
| TE 472. | 1 July, '37 | Midvale Steel Co. Midvale, Pa. | 4 | Forged steel rotor shafts (drawings in file) | 161,300.00 |
| TE 3114 | 6 Oct. '36 | The Bullard Co. 286 Canfield Ave. Bridgeport, Conn. | 1 | Single spindle vertical automatic lathe, with extra attachments for machining motor frames (drawings in file) | 6,000.00 |
| TE 3118 | 15 Oct. '36 | Wm. Sellers & Co. Chambersburg, Pa. | 1 | 16' vertical boring and turning mill | 46,500.00 |
| TE 3129 | 30 Nov. '36 | Wetherill Engr'g Philadelphia, Pa. | 1 | Cast iron die casting machine suitable for making the frame as per drawing K-981100 attached. | |

Note: Inquiry developed into negotiations to purchase exclusive right for use of Wetherill Process in Japan. Asking price was \$250,000. Customer found proposal too expensive, and the deal was dropped.

| | | | | | |
|---------|-------------|--|---|---|-----------|
| MF 2092 | 13 Jan. '39 | United Engineering & Foundry Company, Pittsburgh, Pa. | 1 | 1500 ton high speed steam hydraulic forging press, including valves and piping, dies and intensifier. | 96,625.00 |
|---------|-------------|--|---|---|-----------|

Note: There is a detailed proposal in the file, but no indication that the order was placed. Delivery problematical.

*Situating in the Tsurumi Compound, Yokohama (Banks' Report², p. 13). Detailed descriptions and exact location with maps, photographs and floor plans are given in : Nitschke Report #2387 (p. 72, below, Reference Material); and Nolting Report², pp. 58 - 64 and Exhibits G, K, L, M, N, and O.

N. Y. #250

| Inquiry No. | Date | Manufacturer | No. | Product | Price |
|-------------|------------|---|-----|---------------------|-------|
| MF 2123 | 24 May '38 | Ajax Electric Co. Frankford Ave. & Allen St., Phila., Pa. | 1 | Electrical furnaces | |

Note: Concerns negotiations with Ajax Electric Co. for a license to manufacture Ajax Hultgren furnaces. It appears that JUJI ELECTRIC FURNACE INDUSTRIAL CO. and DENGENSHA stole the idea of the Ajax furnace and commenced manufacturing.

While file does not indicate that license was ever granted, there is a letter of 5 December 1938 concerning royalty for 12 furnaces furnished to SUMITOMO, MITANI SHINDO, ARMY, SAKANE SHINDOSHO, and NIPPON SODA.

MITSUI was made exclusive sales agent.

| | | | | | |
|---------|--------------|--|---|--|-----------|
| MF 2160 | 22 Sept. '39 | Supplier: United Engr. & Foundry Co. Maker: Farrel-Birmingham, Ansonia, Conn. | 1 | Heavy duty roll grinder 50"x20' complete with electric motor | 56,948.00 |
|---------|--------------|--|---|--|-----------|

Note: There is a detailed proposal in the file, but no indication that the order was placed. Delivery problematical.

| | | | | | |
|---------|-------------|---|---|--------------------------------------|--------|
| MF 3114 | 17 Apr. '39 | Kearney & Trecker 6784 W. National Ave. Milwaukee, Wis. | 1 | Astronomical divider for hypoid head | 409.00 |
|---------|-------------|---|---|--------------------------------------|--------|

| | | | | | |
|---------|------------|--|---|---|-----------|
| MF 3152 | 13 May '39 | Hydraulic Press Mfg. Company Mt. Gilead, Ohio | 1 | 300 ton HPM hydro-power Fastraverse platen press | 10,650.00 |
| | | | 1 | 1500 ton HPM hydro-power Fastraverse platen press | 22,473.75 |

| | | | | | |
|---------|------------|--|---|---|--|
| MF 3156 | 22 May '39 | R.D. Bates Co. 39 Cortlandt St., New York, N. Y. | 1 | Carbonometer with galvanometer and one test mold; to find carbon content of castings. | |
|---------|------------|--|---|---|--|

| Inquiry No. | Date | Manufacturer | No. | Product | Price |
|-------------|-------------|--|-----|--|-----------|
| MF 3508 | 29 Mar. '40 | National Broach & Machine Co., Detroit, Mich. | 1 | Special spline mill- ing machine with standard equipment. (drawing in the file) | 42,795.00 |
| TE 2471 | 21 June '37 | Surface Combustion Co., Toledo, Ohio (for Nippon Seitetsu) | 3 | Radiant tube type an- nealing furnaces (as per specifications in file which also con- tains full "proposal and specifications, 12 August 1937" by Surface Combustion Company) | |

Note: Mitsui-Tokyo wrote on 6 July 1938, "Customers have re-
cently placed order with Shibaura Engineering Works."

2. Orders

Note: All orders were shipped unless otherwise specified,
and shipping dates are given when known.

MITSUMI ORDERS

| Order No. | Date | Manufacturer | No. | Product | Price |
|----------------|-------------------------------------|---|-----|--|-----------|
| 46 E.O.1388 | 26 May '39 Shipped: Sept. '39 | Bethlehem Steel Export Company, 25 Broadway, New York, N. Y. | 6 | Forged steel circular plates, 80 mm. thick x 3010 mm. dia. for anodes and cathodes for 3600 Kw mercury rectifier for Nippon Aluminum Company. | 11,685.00 |
| | | | 6 | Forged steel flanges (ring plates) 130 mm. thick x 2760 mm. inside dia. x 3010 mm. outside dia. for 3600 Kw mer- cury rectifier for Nip- pon Aluminum Company. | |
| 46 E.O.1389 | 29 May '39 | Bethlehem Steel Export Company | 2 | Forged steel circular plates, 80 mm. thick x 3010 mm. dia. (1 for 4000 Kw mercury recti- fier for Tohoku Sinkoh Aluminum Co., other for 3400 Kw mercury recti- fier for Sumitomo Alumi- num Company) | 2,675.00 |

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price |
|------------------|--|---|-----|--|-----------|
| 50 E.O.1496 | 7 July '39 | Bethlehem Steel Export Company | 12 | Forged steel circular plates 80 mm. thick x 3010 mm. dia. as anodes and cathodes for 3600 Kw mercury rectifier for Nippon Aluminum Co. | 23,501.88 |
| | | | 12 | Forged steel flanges (ring plates) 130 mm. x 2760 mm. x 3910 mm. for 3600 Kw mercury rectifier for Nippon Aluminum Co. | |
| 1339 E.O.1902 | 7 Jan. '37 | Bartlett & Hayward (Div. of Koppers Co.) Baltimore, Md. | 1 | #2½ flexible coupling | 40.50 |
| 1344 E.O.1974 | 12 Feb. '37 | Bartlett & Hayward | 2 | #2 sets fast flexible couplings | 63.00 |
| 1346 E.O.1998 | Feb. '37 Shipped: 13 Apr. '37 | Bartlett & Hayward | 2 | Fast's size #2½ couplings in accordance with cust- omer's drawing furnished with prior order 28 Sept. '36 (Client's drawing #K-173155 #1) to transmit 9 Kw at 3600 RPM. | 81.00 |
| 1346 Add. E | Mar. '37 Shipped: 12 May '37 | Bartlett & Hayward | 1 | #2½ Fast's coupling as above | 40.50 |
| 2409 E.O.3922 | 15 Dec. '38 Shipped: 31 Jan. '39 | Bethlehem Steel Export Company | 1 | Forged steel main motor shaft, rough turned accord- ing to G.E.'s specification M-501, 1000 mm. in dia., 7300 mm. long overall (as per sketch in file) weight, 67,400 lbs., for Universal mill for Nippon Seitetsu. | 4,788.00 |

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price |
|--|--|--|-----|---|----------|
| 3220 E.O. 1970 | 18 Dec. '39 Shipped: 30 Oct. '39 | McCabe & Shearan Machinery Corp. 50 Church Street New York, N. Y. | 1 | Betts 10' vertical boring machine, re- built belt drive, 2 heads, and cross rail. | 8,000.00 |
| <p><u>Note:</u> This purchase was so urgent that goods were bought in October, shipped in November, before Tokyo's order, dated 18 December, came through.</p> | | | | | |
| 3388 E.O. 3801 | 22 Oct. '38 Shipped: 9 May '39 | Kearney & Trecker | 1 | #4K Universal milling machine with equipment, metric system, including model K spiral Universal hypoid dividing head, with extras. | 8,875.00 |
| Add. | 8 Dec. '38 | Kearney & Trecker | 1 | Model K hypoid Universal bevel gear type ball bear- ing dividing head for above | 1,028.70 |
| 3559 E.O. 1986 | 12 Mar. '37 Shipped: 22 Mar. '37 | Independent Pneu- matic Tool Co. Chicago, Ill. | 2 | Pneumatic sand rammers size 50R - 1 1/4" bore x 5" stroke | 180.00 |
| | | | 2 | Pneumatic bench sand rammers, size 40R e 1" bore x 4" stroke | |
| 3583 E.O. 2418 | 12 May '37 | P.E. Chapman Electrical Works St. Louis, Mo. | 7 | Turn counter dials and worms to fit #20 armature | 175.00 |
| 3606 E.O. 2399 | 13 May '37 Shipped: 26 June '37 | Independent Pneu- matic Tool Co. | 12 | "Thor" pneumatic chippers size #2F, open handle | 372.00 |
| E.O. 2398 | | | 9 | Hexagon nozzles | 363.00 |
| | | | 3 | Round nozzles (for Asano Bussan K.K.) | |

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price |
|-----------------------|--|---|-----|---|-----------|
| 3626 E.O.2157 Rev. | 18 June '37 Shipped: 3 Feb. '38 | Giddings & Lewis Fond du Lac, Wis. | 1 | New type #350- PQ-2H high power precision planer type horizontal: boring, drilling and milling machine, multiple head, metric system, including 2 side milling at- tachments, 2 vertical heads, and 2 adjustable cutter supports. Motors: 3 phase, 50 cycles, 200 volts. | 49,500.00 |
| | | | 1 | Turbo-generator rotor slot milling machine- largest rotor 30 tons, diameter, 40". | |
| 3792 E.O.2764 | 21 Sept. '37 Cancelled: 2 Nov. '38 | Van Norman Machine Tool Company, Springfield, Mass. | 1 | #12 Universal mill- ing machine : | 1,944.00 |
| | | | | <u>Note:</u> Superseded by E.O.3863 | |
| Add. | 19 Nov. '37 Cancelled: 2 Nov. '38 | Van Norman | 1 | Sub head, 10" Univ- ersal center, slotting attachment for rotary table, etc. for above | 1,029.00 |
| 3794 Rev. E.O.2858 | 8 Jan. '38 Shipped: 23 Feb. '38 | Norton (for Tsurumi) | 1 | 6"x30" type C plain grinder, hydraulic table traverse, ar- ranged for motor drive without motor and com- plete with average equipment | 3,364.80 |

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price |
|-----------|------|--------------|-----|---------|-------|
|-----------|------|--------------|-----|---------|-------|

3794 Rev.
(Cont'd)

Extra Equipment
 1 Center pointing device
 1 Steady rest, two bearing, hand operated
 1 Wheel spindle reciprocating attachment
 1 Continuous power cross feed
 1 Radial truing device, table type

Electrical Equipment
 1 7-1/2 HP, 1500 RPM, 3 phase, 50 cycle, 200 volt motor
 1 1/4 HP, 650/2600 RPM, DC, 220 volt motor

3811 Rev.
E.O.2459

29 Sept. '37
Shipped:
3 Nov. '37

Warner & Swasey⁹
Cleveland, Ohio

1 set #5 12-speed AGH 3,745.50
 turret lathe with complete equipment
 1 Bar equipment consisting of:
 1 M-641 flanged tool holder
 1 M-309 combination stock sand cutter
 1 M-1375 single cutter turner
 1 M-299 multiple cutter turner
 1 M-850 end facing tool
 1 M-898 centre drilling tool

Note: To be used with
 1 7-1/2 HP, 1800 RPM,
 motor made by Shibaura.

3951
E.O.2146

4 Aug. '37
Shipped:
9 Nov. '37

Kearney & Trecker
(for stock)

1 #2H vertical milling 3,610.35
 machine
 1 6" plain vise
 1 #41B3 cutter arbor

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price |
|--------------------|-------------|---|--------|---|----------|
| 3381 ¹⁰ | 10 Jan. '39 | | 1 | 10"x36" latest type C plain grinding machine, hydraulic traverse, motor driven, complete with standard & average equipment. | 6,821.05 |
| | | | | <u>Electrical Equipment</u> | |
| | | | 1 | 10 HP, 1500 RPM, 3 phase, 50 cycle, 200 volt for wheel drive | |
| | | | 1 | 3/4 HP adjustable speed, DC, 220 volt motor for work drive | |
| | | | 1 | 2 HP, 2000 RPM, AC, 3 phase, 50 cycle, 200 volt motor for table traverse. | |
| 5288 E.O.1969 | 12 Feb. '37 | Charles H. Bosly 118 N. Clinton St. Chicago, Ill. | 20 | Cans Helmet glue (25 lbs. each) | 171.00 |
| 5299 E.O.2045 | 10 Mar. '37 | Stackpole Car- bon Company, St. Mary's, Pa. | 2000 | Carbon brushes for generator for Ford automobile: | 77.00 |
| | | | 1000 | K770,008 #10 | |
| | | | 1000 | K770,041 #5 | |
| 5303 E.O.2069 | 18 Mar. '37 | Stackpole Car- bon Company. | 16,500 | Brushes for Ford auto.obile: | 565.54 |
| | | | 4,000 | K770,041 #4 | |
| | | | 2,000 | K770,008 #7 | |
| | | | 2,000 | K770,008 #9 | |
| | | | 3,000 | V8,K770,051 | |
| | | | 1,000 | V8,K770,052 | |
| | | | 1,000 | V8,K770,051 | |
| | | | 2,000 | V8,K770,052 | |

Note: Omit tradename
"FORD"

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price | | |
|------------------------------|--------------|--|--------|---|--------|--|--|
| 5304 E.O.2070 | 18 Mar. '37 | Stackpole Car- bon Company | 42,000 | Brushes for Ford automobile | 741.03 | | |
| | | | 12,000 | V8, K770, 051 | | | |
| | | | 6,000 | V8, K770, 052 | | | |
| | | | 12,000 | K770, 041 #5 | | | |
| | | | 12,000 | K770, 008 #10 | | | |
| Note: To be marked "FORD" | | | | | | | |
| 5327 E.O.2864 | 30 Sept. '37 | Int. G.E. 570 Lexington Av. New York, N.Y. | 1 | Arc welder, AC, equipment and accessories, trans- former type for single phase, 50 cycle, 220/110 volt, 750 amperes maximum welding current; consisting of: | | | |
| | | | 1 | Remote control equipment | | | |
| | | | 1 | Motor panel | | | |
| | | | 1 | Standard steel wheel | | | |
| | | | 1 | Automatic voltage | | | |
| | | | 1 | Reducing control equipment | | | |
| | | | 1 | set standard acces- sories including helmet | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| E.O.3756 | 3 Nov. '38 | General Electric | 1 | set carrier cur- rent controller, type SC-5, H-6. for outdoor use | 29.50 | | |
| | | | | Extra for special head #18 Brown & Sharpe taper spindle drive. | 575.00 | | |

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price |
|--------------------------|---|--|-------------|---|----------|
| 5338 E.O.3026 | 2 Feb. '38 | Stackpole Carbon Company | 1,600 | Auto brushes for Ford Autos V8, K770,051 | 178.28 |
| | | | 800 | Auto brushes for Ford Autos V8, K770,052 | |
| | | | 1,600 | Auto brushes for Ford Autos K770,008 #10 | |
| | | | 1,200 | Auto brushes for Ford Autos K770,041 #5 | |
| 5361 E.O.1392 | 8 May '39 Shipped: 19 Aug. '39 | Int. G. E. 570 Lexington Av. New York, N. Y. | 600 | Carbon slabs, grade "D", 2-3/4"x1-3/8"x5-1/4" | 696.00 |
| 5367 E.O.1390 | 8 May '39 Shipped: 1 Aug. '39 | Int. G. E. | 180 | Carbon slabs, grade "G", 2-3/4"x1-3/8"x5" | 224.00 |
| 5383 E.O.1920 | 15 Sept. '39 Shipped: 11 Dec. '39 | Int. G.E. | 5,100 lbs. | Stainless steel non-magnetic wire | 6,455.05 |
| 5388 E.O.2113 | 16 Oct. '39 Shipped: 12 Dec. '39 | Int. G.E. | 17,600 lbs. | Welding electrodes W23F 3/16"x18" | 5,738.06 |
| | | | 17,600 lbs. | Welding electrodes W23F 5/16" x 18" | |
| | | | 52,800 lbs. | Welding electrodes W23F 1/4" standard lengths | |
| <u>MITSUBISHI ORDERS</u> | | | | | |
| TR 5373 | 14 July '39 | Int. G. E. | 21,600 kgs. | #1478 Pyranol (14,400 litres, 22 drums) | 5,620.00 |

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price |
|----------------------|-------------|--|-----|---|----------|
| TR 7557A Inq. 706 | 7 July '39 | Barnes Drill Co. 814 Chestnut St. Rockford, Ill. | 1 | 20" round column drilling and tapping machine, self-oiling, all geared, 8 quick change geared speeds, 8 geared feeds, 1 automatic stop, 1 #4 Morse taper spindle, 1:1 crown gear ratio and hand wheel. | 817.00 |
| TR 7592 Inq:667 | 14 Apr. '37 | Hill Clarke Machine Company, Chicago, Ill. | 1 | Rebuilt 53" Niles Bement Pond vertical boring mill, 2 plain swivel heads in cross rail, power rapid traverse. | 3,750.00 |
| | 28 Apr. '37 | | 1 | Rebuilt 54" Bullard vertical boring mill, 2 plain swivel heads on rail, plain tail and power rapid traverse, Swing, 56"; height under rail, 42"; diameter of table, 52"; vertical travel of head, 36". | 3,150.00 |
| TR 7687 Inq. 56 | 9 Sept. '37 | Faylor Strafer Machine Company, 136 Liberty St. New York, N. Y. | 1 | Used 100" Cincinnati vertical boring and turning mill, 2 swivel heads on the cross rail; one 20 HP, 220 volt, DC, motor, with variable speed, 450/1350 RPM for main drive; and small motor on top of bridge; diameter of table 96". | 8,500.00 |

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price |
|---------------------|-------------|--|-----|--|----------|
| TR 8131 Inq. 319 | 28 Feb. '38 | Andrews & George 50 Church Street, New York, N. Y. | 1 | Cincinnati #4 plain hi-speed dial type milling machine with one 1-1/4" B-24-4 arbor | 6,312.76 |

ATAKA ORDERS

| | | | | | |
|------|---------------------------------------|--|----|---|----------|
| 447 | 24 Jan. '39 | Gleason Works ¹¹ 1000 University Av. Rochester, N. Y. | 1 | #13 Universal gear testing machine with full standard equipment. | 4,675.00 |
| | | | 1 | 15" quenching press with electrical auto- matic timing ar- rangement for 220 volt, 3 phase, 50 cycle motor, in- cluding a Universal lower die and an equalizing upper die for a conventional design bevel ring gear. | 3,025.00 |
| 5833 | 2 Dec. '38 Shipped: 15 Feb. '39 | Gleason Works | 1 | 15" spiral bevel cutter sharpener (Serial #14392) metric system with exhaust equipment arranged for belted motor drive, exclusive of electrical equipment for sharpening 6", 9", 12" diameter cutters including grinding wheel and wheel dresser but no diamond | 1,941.28 |
| | | | 12 | Part J.128B grinding wheels | |

N. Y. #250

| Order No. | Date | Manufacturer | No. Product | Price (\$) |
|---------------|---------------------------------------|---|---|------------|
| 5833 (Cont'd) | | | <u>Note:</u> Machine to be arranged for Shibaura 1K type 1 HP, 1500 RPM, constant speed motor for 200 volts, 50 cycles, 3 phase, AC, as per dimen- sions (drawing in file) | |
| 5847 | 18 Nov. '38 Shipped: 8 Mar. '39 | Heald Machinery Co. Worcester, Mass. | 1 #74 internal grind- ing machine, metric system with standard equipment, arranged for 3 motor drive, AC, 4-speed work head motor, including motors and controls for 220 volt, 3 phase, 50 cycles, AC, <u>Equipment:</u> 1 Water attachment with pump, tank and filter 1 Facing attachment, rack and pinion type, hand table feed. 1 Positive stop to table, for blind hole grinding 1 #21214B 21" "Cushman" 4-jaw independent chuck, steel body with reversible one piece jaws, and with adapter plate 1 #153 naked style wheel head 2-3/8" diameter x 10" length of spindle nose. 12 Grinding wheels for said wheel head. | 7,874.62 |
| 5848 | 18 Nov. '38 Shipped: 3 Mar. '39 | Gleason Works | 1 #16 hypoid generator arranged for jobbing work, metric system, with full standard equipment. | 11,059.94 |

N. Y. #250

Order No. Date Manufacturer No. Product Price(\$)

5848 (Cont'd)

Equipment:

Full set of index and
ratio of roll change gears;
Full set of feed change
gears;
Full set of speed change
gears;
Full set of cradle roll
change gears;
Double track feed cam for
roughing gear cabinet;
Electrical equipment for
3 phase, 50 cycle, 220 volt,
AC, including 5 HP main motor;
Spindle bored to #18 Brown &
Sharpe taper (3-27/64" nominal
diameter at large end with
1/2" taper per foot;
Spiral bevel roughing cutter:
 6" dia., 12 blade
 9" dia., 16 blade
 12" dia., 20 blade
Finishing cutter with alternate
inside and outside cutting
blades:
 2-6" dia., 12 blade
 2-9" dia., 16 blade
 1-12" dia., 20 blade

5858-A

14 Feb. '40

Gleason Works

7 sets Arbor parts for 810.00
pinions
1 set Single handwheel
arrangements for use
with above arbor
equipment.

7844

25 Nov. '36

Cancelled:

1 Dec. '36

due to maker's
inability to
furnish.

Brown & Sharpe
Providence, R.I.,

1 #2B standard plain 2,750.00
milling machine
fitted to receive
Shibaura type IK
motor, 5 HP, 1500 RPM,
220 v., 3 phase, 50
cycle, AC.

N. Y. #250

IMPERIAL EXPORT COMPANY ORDERS

| <u>Order No.</u> | <u>Date</u> | <u>Manufacturer-</u> | <u>No.</u> | <u>Product</u> | <u>Price (\$)</u> |
|------------------|-------------|--------------------------------------|------------|--|-------------------|
| 12/218 | 15 Jan. '37 | Potter & Johnston Pawtucket, R.I. | 1 | #6 DL automatic chucking and turning machine | 6,039.00 |
| 12/431 | 30 July '37 | Potter & Johnston | 2 | #2N horizontal milling machines | 5,511.00 |
| 12/431 | 30 July '37 | Potter & Johnston | 10 | Model 6A rebuilt automatic chuck- ing machines | 19,688.00 |
| 12/432 | 30 July '37 | Potter & Johnston | 2 | Model 6 DRE automatic chuck- ing machines | 12,585.00 |
| 13/519 | 17 Jan. '38 | Potter & Johnston | 1 | 16" Universal scroll chuck | 166.50 |

3. Amendments to Banks' Report²

a. Item 13, Page 35

This order, consisting of two lots, each of 16 forged steel circular plates, was not all delivered in one shipment. The date given in the Banks' report, 6 July 1940, applies only to the first lot of 16. The second lot of 16 was shipped only in October and November of 1940, the last shipment of two pieces occurring on 27 November.

b. Item 24, Page 36

This order consists of two forged steel flanges. The date given, 29 July 1940, applies to one of them only. The date of shipment of the other flange is not known.

c. Item 27, Page 37

The shafts in question were to be used for hydraulic generators of Kimita Power Station of the company mentioned.

C. SHIBAURA MACHINE TOOL COMPANY (SHIBAURA KOSAKU KIKAI K.K.)*ORDERS

Note: All orders were shipped unless otherwise specified, and shipping dates are given when known.

MITSUI ORDERS

| Order No. | Date | Manufacturer | No. | Product | Price (\$) |
|-------------------|-------------|-----------------------------------|-----|--|------------|
| 3521 E.O.1706F | 30 Jan. '40 | Kearney & Trecker | 1 | #3K Universal milling machine with conventional load, metric system, and standard equipment. | 7,418.50 |
| | | <u>Note:</u> Probably not shipped | 1 | Dividing head | |
| 3521 Add. | 3 Mar. '41 | Int. G. E. | 1 | 10 HP, 1500 RPM, 220 volt, 3 phase, 50 cycle, AC, motor and control for above. | 125.80 |

ATAKA ORDERS

| | | | | | |
|-----|-------------|----------------|----|----------------------------|----------|
| 766 | 18 Dec. '40 | Brown & Sharpe | 30 | Inside micrometer calipers | 2,201.63 |
| | | | 20 | Inside micrometers | |
| | | | 25 | Combination sets | |
| | | | 30 | Vernier calipers | |
| | | | 25 | Gear tooth verniers | |
| | | | 30 | Micrometer depth gages | |

* Located in the Tsurumi Compound, Yokohama. See Mitschke Report #2830, p.9 (Reference Material, p.72, below) and Nolting Report³, p.71. This plant is not to be confused with "MITSUI MACHINE TOOL COMPANY OR TOYO KOSAKU KIKAI K.K." described in report of 4 August 1943, #3178, N.Y. #199, by Don H. Banks, Economic Warfare Section, Department of Justice, located at Okekawa or at Fuchu-chip, Tamakoon, Tokyo.

N. Y. #250

D. SHIBAURA UNITED ENGINEERING CO., LTD. (SHIBAURA KYODO KOGYO K.K.)*

1. Inquiries which did not result in orders

MITSUI INQUIRIES

| <u>Inquiry No.</u> | <u>Date</u> | <u>Manufacturer</u> | <u>No.</u> | <u>Product</u> | <u>Price (\$)</u> |
|--------------------|-------------|---|------------|---|-------------------|
| TE 2641 | 14 Feb. '40 | United Engineering & Foundry Company (for Nippon Seitetsu) | 1 | 6000 metric ton pure hydraulic forging press, complete with accessories for wheel forging plant (Detailed specifications in file) | |

Note: On 7 March 1940, Ladd wrote to Kobayakawa (President of Shibaaura Kyodo Kogyo K.K.) discouraging the production of forging presses by that company, viz:

"The tremendous size of the steel castings and forged steel columns involved together with cylinders, you can practically assume it is not possible to secure in Japan and would have to be imported from this country... If you will give us sufficient advance information so that we can advise you with regard to some of the weights and sizes involved in the construction of these presses, we will be very glad to do so, but under no circumstances bid on work of this kind assuming that all materials can be secured in Japan."

* Located in the Tsurumi Compound, Yokohama. See Exhibits "(1)" and "(2)" attached to Kline and Collins Report.¹

N. Y. #250

Inquiry No. Date Manufacturer No. Product Price (\$)

MF 2292 29 Mar. '41 United Engineering & Foundry Company "Prospective customer wishes to install processing uncoiler in hot strip shearing line." Inquiry calls for typical prints and information.

Note: United Engineering cannot furnish, and referred inquiry to McKay Machine Co. Latter company refused to sell the prints, but quoted through United Engineering for machine, \$52,400.00. Correspondence does not indicate anything further done with inquiry. Delivery questionable.

2. Orders

Note: All orders were shipped unless otherwise specified, and shipping dates are given when known.

mitsui orders

Order No. Date Manufacturer No. Product Price (\$)

T.O. 3367 (Rev. 2) 16 Aug. '40 Farrel-Birmingham Ansonia, Conn. 1 #12K generating machine complete with 1 pair of

E.O. 2233

Note: The gear generating machine was not delivered because requisitioned by U.S. Navy for navy work, nor was the balance of the order delivered. 12

helical guides with helical angle 30°, outer support bearings for bores 5-1/2", 7-1/2", 11-1/2", 16", 20", 24", 28" and 32" and roller rim steadies. Machine also complete with main drive motor for DC, 220 volt, and auxiliary motors for AC, 220 volt, 3 phase, 50 cycles.

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price (%) |
|---------------------------------|------|--------------|-----|---|-----------|
| T.O. 3367 (Rev. 2) Cont'd | | | | | |
| | | | | <u>Extra Equipment</u> | |
| | | | | 1 Complete set of change gears suitable for cutting all numbers of teeth including prime numbers up to 200 and larger numbers excepting primes or integral multiples of primes larger than 199. | |
| | | | | 1 Pair of spur guides for cutting spur gears | |
| | | | | 1 Pair of helical guides for cutting single helical gears with helical angle 7-1/2" | |
| | | | | 1 6" work arbor with nut | |
| | | | | 1 8" work arbor with nut | |
| | | | | 1 12" work arbor with nut | |
| | | | | 1 Adaptor suitable for both 6" and 8" arbors | |
| | | | | 1 Driving plate for clamping flanged spindles | |
| | | | | 1 Face plate 85" dia. | |
| | | | | 1 Face plate extension 10" wide | |
| | | | | 1 Apex setting fixture | |
| | | | | 1 Gauge for checking apex position, similar to the larger one shown in maker's own photo. #1616 and #1617 | |
| | | | | 1 set line bar equipment consisting of: 1-large line bar 1-long shaft 1-small line bar 1-long line bar 1-V block 1-aligning tube 1-flat block | |

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price(\$) |
|-------------------------------|-------------|-------------------|-----|---|-----------|
| T.O. 3367-2Rev. E.O. 2868 | 7 Aug. '40 | Farrel-Birmingham | 6 | Pairs helical cutters for cutting double helical gears with 12K gear generating machine. All the helical angle to be 30° and the pressure angle 20°. | 36,000.00 |
| | | | 6 | Pairs helical cutters for cutting single helical gears with 12K gear generating machine. Pressure angle to be 20°. | |
| | | | 6 | Pairs spur cutters for cutting spur gears with 12K gear generating machine. Pressure angle to be 20°. | |
| T.O. 3487 E.O. 2809 | 12 Jan. '40 | Farrel-Birmingham | 1 | Sykes cutter generating machine for cutters to be used on #12K Sykes gear generating machine, complete with electric motors and controls for 50 cycle, 200 volt, 3 phase. | 17,500.00 |
| T.O. 3488 E.O. 2810 | 12 Jan. '40 | Farrel-Birmingham | 1 | Cutter grinding machine for cutters to be used on 12K gear generating machine, complete with electric motor and controls for 50 cycle, 220 volt, 3 phase. | 5,000.00 |
| T.O. 3489 E.O. 2233 Add.#3 | 10 July '40 | Farrel-Birmingham | 1 | Cutter testing machine for the cutters to be used with 12K gear generating machine. Machine complete with electrical equipments arranged for 3 ph., 50 cycle, 220 volt. Also to be used with #5B gear generating machine. | 4,400.00 |

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price (\$) |
|-----------------------------|------------|--|-----|--|------------|
| T.O. 3653 Rev. E.O. 2521 | 31 Aug '40 | Farrel-Birmingham | 1 | #5B Sykes gear generating machine with main motor for D.C. 220 volt and auxiliary motor for A.C. 220 volt. Machine complete with one pair of helical guides for cutting 30° helical angle rim sup- ports and outer support with eight bushes | 29,500.00 |
| | | Note: This superseded Order No. 3653 and Order No. 3653 Add. | | | |
| | | | | Extra: | |
| | | | 1 | Complete set of change gears (65) with from 24 to 151 teeth | |
| | | | 1 | Apex setting fixture, large | |
| | | | 1 | Apex setting fixture, small | |
| | | | 1 | Brown & Sharpe dial test indicator complete with combination square | |
| | | | 1 | 54" dia. face plate | |
| | | | 1 | 5" dia. bore adaptor | |
| | | | 1 | 3" dia. arbor | |
| | | | 1 | Complete set of wrenches and spanners | |
| | | | 1 | Internal cutting attachment | |
| | | | 1 | Instrument for testing herringbone gears | |
| | | | | Additional cost for supply- ing D.C. motor and controls | |
| | | | 7 | pairs helical cutters for cutting double helical gears with #5B gear gen- erating machine. Helical angle to be 30°, pressure angle 20°. | |
| | | | 7 | Pairs helical cutters for cutting single helical gears with #5B gear gen- erating machine. Helical angle to be 7-1/2°, pressure angle to be 20°. | |

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price (\$) |
|----------------------------|-------------|--------------------------------------|-----|--|------------|
| T.O. 3653 Rev. (Cont'd) | | | 7 | Pairs straight tool cutters for cutting spur gears with #5B gear generating machine. Pressure angle 29°. | |
| | | | 1 | Gear-tooth comparator complete with all gauge blocks for the gears being cut on both 5B and 12 K gear generators | |
| 11000 | 30 Apr. '40 | United Engineering & Foundry Company | 1 | Set prints for roll pass design | 800.00 |
| | | | 1 | Set prints for twist guide design | 2,500.00 |

Note: This is the same transaction described in PART ONE, C, "Beginning of Operations and UNITED'S Continued Aid." Designs were to be used for the Kawasaki Wire Rod Mill.

| | | | | | |
|-------|-------------|--------------------------------------|---|--|-----------|
| 11005 | 27 Mar. '41 | United Engineering & Foundry Company | 1 | Set manufacturing drawings for electrolytic cleaning line for duralumin strip. | 5,400.00 |
| 11006 | 29 Mar. '41 | United Engineering & Foundry Company | 1 | Set manufacturing drawings for operating valve for hydraulic forging press. | 12,000.00 |

3. Amendments to Banks' Report

Item B, Page 23 - "Exclusive Manufacturing Rights..for Cone Worm Gear."

This transaction also covered the assignment by Scott of all the rights owned by him in Japanese Patent No. 13651, dated 1 July 1934, and of all Japanese patents pending by him. He also assigned to SHIBAURA-UNITED all his rights in U.S. patents and inventions for the territories of Japan, China and Manchuria. For 10 years Scott was to furnish prints, drawings, engineering and technical data relating to cone worm gearing, speed reducers and apparatus for making the same.

E. SHIBAURA MAZDA MANUFACTURING CO. (SHIBAURA MATSUDA KOGYO K.K.)

1. Inquiries which did not result in orders.

| Inquiry No. | Date | Manufacturer | No. | Product |
|-------------|------------|---|-----|---|
| TE 3193 | 4 June '39 | W.F. & John Barnes 310 S. Water St. Rockford, Ill. (or Other Makers) | 1 | Drilling machine suitable for drilling, tapping and facing part of cast iron shown on drawing attached; production required 1500 pieces per 8 continuous hours. |

Note: Urgently Wanted.
Reply of Barnes;
"Machine must be specially designed."

2. Orders

Note: All orders were shipped unless otherwise specified, and shipping dates are given when known.

MITSUMI ORDERS

| Order No. | Date | Manufacturer | No. | Product | Price (\$) |
|---------------------------|---|-------------------|-----|--|------------|
| 3664 E.O. 2147 Rev. | 9 Sept. '37 Shipped: 16 Sept. '37 | Kearney & Trecker | 1 | Milwaukee face mill grinder with 1 HP, 3600 RPM, 3 phase, 50 cycle, 200 volt, AC, motor 6" cup wheel exhaust hand wheel dresser and dial indicator | 1,633.50 |
| E.O. 2147 Add. | 3 Nov. '37 Shipped: 11 Jan. '38 | Kearney & Trecker | 1 | Exhaust system of section fan flexible hose | 121.50 |
| | | | 5 | sets Type #6 Norton grinding wheels suitable for grinding tungsten carbide, total 4" dia, 2" height x 5/8" hole x 1/2" | |

Note: T.O. 3664 reads: "Tokio Gas Denki K.K., Auto Dept.", but Mitsui's Invoice No. #3277 to MBK, Yokohama reads: "Shibaura Matsuda Kogyo K.K.". It is possible that Tokio Gas Denki had transferred its bulb manufacturing plant to Shibaura Matsuda Kogyo K.K.

E. O. #250

| Order No. | Date | Manufacturer | No. Product | Price (\$) |
|------------------|--|--------------|---------------------|------------|
| 5400 E.O.3053 | 14 June '40 Shipped: 18 June '40 | Int. G. E. | 145 lbs. Freon gas | 74.22 |
| 5401 E.O.3094 | 8 July '40 Shipped: 25 July '40 | Int. G.E. | 145 lbs. Freon gas | 74.03 |
| 5402 E.O.3095 | 8 July '40 | Int. G.E. | 145 lbs. Freon gas | 65.07 |
| 5406 E.O.3183 | 7 Sept. '40 | Int. G.E. | 145 lbs. Freon gas | 65.07 |
| 5409 E.O.3270 | 8 Nov. '40 | Int. G.E. | 145 lbs. Freon gas | 65.07 |
| 5415 E.O.3309 | No date | Int. G.E. | 4500 lbs. Freon gas | 2,041.50 |
| 5416 | 5 Feb. '41 | Int. G.E. | 145 lbs. Freon gas | 69.62 |

mitsubishi orders

| | | | | |
|----------|------------|--------------|--|--------|
| TR 7557A | 7 July '37 | Barnes Drill | 1 20" round column drilling and tapping machine, self-oiling, all geared, 8 quick change geared speeds, 8 geared feeds, 1 auto- matic stop, 1 #4 Morse taper spindle, 1:1 crown gear ratio and hand wheel. | 817.00 |
|----------|------------|--------------|--|--------|

Imperial Export Orders

| | | | | |
|--------|--------------------------|-------------------|-------------------------------------|----------|
| 12/473 | 4 Oct. '37 Cancelled. | Potter & Johnston | 1 #2M horizontal milling machine | 2,755.50 |
|--------|--------------------------|-------------------|-------------------------------------|----------|

F. TOKYO SHIBAURA ELECTRIC COMPANY (TOKYO SHIBAURA DENKI K.K. -TOSHIBA-)*1. Inquiries which did not result in ordersmitsui inquiries

| Inquiry No. | Date | Manufacturer | No. | Product | Price (\$) |
|-------------|--|--|---------|---|---------------|
| TE 538 | 29 Aug. '39 | Bethlehem Steel and Others | 3 | Flanged shafts 4,475 mm. long, weighing 8700 lbs. each. | 2,401.20 ea. |
| | (Note: Shibaaura Inq. #1495 1822 1823) | | 2 | Forged steel flanged shafts, 6120 mm. long, weighing 11,000 lbs. each | 12,024.00 ea. |
| | | | 6 | Forged steel spider rims (as per blueprints attached) | 6,322.80 ea. |
| TE 548 | 11 Sept. '39 | Bethlehem Steel and Others | 188 | Circular and ring plates to be used for mercury rectifiers. | 40,329.77 |
| TE 552 | 14 Sept. '39 | Bethlehem Steel and Others | 4 | Rotor shafts | 77,720.00 |
| TE 553 | 21 Sept. '39 | Bethlehem Steel | 8 5 | Rotor shafts Spider rims | No price |
| TE 554 | 19 Sept. '39 | Bethlehem Steel (for Kyosenko Suiryoko Denki K.K.) | 8 28 | Rotor shafts Spider rims | No price |
| TE 559 | 19 Sept. '39 | Bethlehem Steel and Others | 4 | Shafts | 2,137.50 |
| TE 560 | 19 Sept. '39 | Bethlehem Steel and Others (for Nippon Seitetsu, Hirohata Works) | 13 | Shafts | |

* The main plants are located at Kawasaki. For a detailed discussion of the location of the various plants, see Nolting Report², pp. 7 - 8 and passim.

| Inquiry No. | Date | Manufacturer | No. | Product | Price (\$) |
|-------------|--------------|---|----------|--|------------|
| TE 561 | 19 Sept. '39 | Bethlehem Steel and Others (for Yanagi Suiryoko) | 4 | Rotor shafts (as per drawings) | 34,584.00 |
| TE 562 | 19 Sept. '39 | Bethlehem Steel and Others (for Nippon Kai Denki) | 2 6 | Rotor shafts Spider rims (as per drawings) | 2,070.00 |
| TE 563 | 19 Sept. '39 | Bethlehem Steel and Others (for Chuoh Denki) | 1 | Rotor shaft (as per drawings) | 703.00 |
| TE 564 | 19 Sept. '39 | Bethlehem Steel and Others (for Nippon Aluminum) | 2 2 | Rotor shafts Spider rims (as per drawings) | 1,585.00 |
| TE 565 | 19 Sept. '39 | Bethlehem Steel and Others (for Kameoko Suiden) | 2 | Rotor shafts | 7,350.00 |
| TE 566 | 19 Sept. '39 | Bethlehem Steel and Others (for Kuroke-gawa Denryoku) | 2 2 | Rotor shafts Spider rims | 4,168.50 |
| TE 567 | 19 Sept. '39 | Bethlehem Steel and Others (for Dai Nippon Denryoku) | 2 4 | Rotor shafts Spider rims | No price |
| TE 568 | 19 Sept. '39 | Bethlehem Steel | 4 | Sets of cast steel rotor bosses (as per drawings) | 27,661.00 |
| TE 572 | 22 Sept. '39 | Bethlehem Steel and Others | 5 10 | Rotor shafts Rings | No price |
| TE 573 | 23 Sept. '39 | Bethlehem Steel and Others | 6 | Rotor shafts (as per drawings) | 3,664.00 |
| TE 576 | 2 Oct. '39 | Bethlehem Steel and Others (for Nippon Aluminum K.K. Karenko) | 12 12 | Circular plates Flanges | No price |

| Inquiry No. | Date | Manufacturer | No. | Product | Price(\$) |
|-------------|------------|--|-------------|--|-----------|
| TE 577 | 2 Oct. '39 | Bethlehem Steel and Others (for Nippon Soda K.K.) | 12 12 | Circular plates Flanges | No price |
| TE 580 | 2 Oct. '39 | Bethlehem Steel and Others (for Chosen Chisso K.K.) | 4 4 | Circular plates Flanges | No price |
| TE 581 | 2 Oct. '39 | Bethlehem Steel and Others (for Mitsui Kozan K.K.) | 10 10 | Circular plates Flanges | No price |
| TE 583 | 3 Oct. '39 | Any Maker (for Nippon Hassoden K.K.) | 1 2 1 | Rotor shaft End rings Fan spider | No price |
| TE 584 | 9 Oct. '39 | Bethlehem Steel and Others (for Nippon Kai Denki) | 1 3 | Rotor shaft Spider rims | 4,763.03 |
| TE 585 | 9 Oct. '39 | Bethlehem Steel and Others (for Nippon Hassoden) | 3 | Shafts | No price |
| TE 587 | 6 Oct. '39 | Bethlehem Steel and Others (for Tokyo Dento, Akimoto) | 2 12 | Rotor shafts Spider rims | No price |
| TE 588 | 6 Oct. '39 | Bethlehem Steel and Others (for Nippon Hassoden, Takasimizu) | 4 | Rotor shafts | No price |
| TE 589 | 6 Oct. '39 | Bethlehem Steel and Others (for Nippon Hassoden, Kuroko) | 3 | Rotor shafts (as per drawings) | 5,153.13 |
| TE 590 | 6 Oct. '39 | Bethlehem Steel and Others (for Nippon Hassoden, Kaminose) | 2 | Rotor shafts (as per drawings) | 2,702.70 |

| Inquiry No. | Date | Manufacturer | No. | Product | Price (\$) |
|-------------|-------------|--|-------------|---|------------|
| TE 591 | 6 Oct. '39 | Bethlehem Steel and Others (for Nippon Hassoden, Korosi) | 2 | Rotor shafts (as per drawings) | 2,937.00 |
| TE 592 | 14 Feb. '39 | Camden Forge Camden, N. J. (for Nippon Hassoden, Kimita) | 2 | Rotor shafts (as per drawings) | No price |
| TE 593 | 6 Oct. '39 | Bethlehem Steel and Others (for Nippon Hassoden, Sumikawa) | 2 | Rotor shafts (as per drawings) | 1,435.00 |
| TE 594 | 6 Oct. '39 | Bethlehem Steel and Others (for Tyuo Denki, Isozawa) | 1 | Rotor shaft (as per drawings) | 665.00 |
| TE 611 | 16 Oct. '39 | Bethlehem Steel (for Taiwan Denryoku) | 2 1 | Flanged shafts Rotor shaft | 6,736.50 |
| TE 612 | 18 Oct. '39 | Bethlehem Steel and Others (for Dai Nippon Dengyo K.K.) | 6 6 | Circular plates Flanges (To be used for vacuum vessel of mercury rectifier) | 8,308.13 |
| TE 616 | 21 Oct. '39 | Bethlehem Steel (for Tohoku-Sinko Oya) | 2 4 | Shafts Spider rims | No price |
| TE 617 | 25 Oct. '39 | Bethlehem Steel and Others (for Seisen Kagaku K.K.) | 8 8 | Circular plates Flanges | No price |
| TE 624 | 9 Nov. '39 | Bethlehem Steel and Others (for Toyo Koatsu Kogyo, Surakawa) | 2 4 2 | Rotor shafts Ehd rings Fan spider rims | No price |

| Inquiry No. | Date | Manufacturer | No. | Product | Price (\$) |
|-----------------------------------|-------------|--|-------------|--|------------|
| TE 625 | 13 Nov. '39 | Bethlehem Steel and Others (for Nippon Hassoden, Takasimizu) | 4 | Shafts (Blueprints in file) | 23,522.10 |
| TE 626 | 14 Feb. '40 | Camden Forge and Others | 2 | Shafts (Blueprints in file) | 5,440.00 |
| TE 627 | 14 Nov. '39 | Bethlehem Steel and Others | 4 8 6 | Shafts Rotor spider rims Rotor rims (Blueprints in file) | 59,205.40 |
| TE 628 | 14 Nov. '39 | Bethlehem Steel and Others (for Nippon Tokusyako) | 4 | Rotor spider rims (Blueprints in file) | 2,576.00 |
| TE 630 | 14 Nov. '39 | Bethlehem Steel and Others (for Imperial Gov't. Railways) | 4 4 | Circular plates Flanges | No price |
| <u>Note:</u> See T.O. 85, 92, 112 | | | | | |
| TE 633 | 21 Nov. '39 | Bethlehem Steel and Others (for Manshu Dengyo, Botanko) | 1 | Special steel forged rotor shaft | 1,508.39 |
| TE 636 | 28 Nov. '39 | Bethlehem Steel (for Tyuo Denki, Noborikawa) | 1 | Forged steel rotor shaft (Blueprint in file) | No price |
| <u>Note:</u> See T.O. 83 | | | | | |
| TE 637 | 30 Nov. '39 | Bethlehem Steel | 1 | Carbon steel forged rotor shaft (Sketch in file) | No price |
| <u>Note:</u> See T.O. 99 | | | | | |

N. Y. #250

| Inquiry No. | Date | Manufacturer | No. | Product | Price (\$) |
|-------------|------------------------------------|---|-----|--|--------------|
| TE 639 | 8 Dec. '39 | Bethlehem Steel | 8 | Forged steel circular plates | 21,529.60 |
| | Order withdrawn | | 8 | Forged steel flanges | |
| TE 641 | 22 Dec. '39 | Bethlehem Steel (for Oryokko-Suiden) | 2 | Carbon steel forged rotor shafts | No price |
| | Note: See T.O. 87 | | | | |
| TE 647 | 10 Jan. '40 | Hepponstall Company, Pittsburgh, Pa. | 2 | Special alloy steel forged end rings, 1305 lbs. each (as per drawing) | 365.00 ea. |
| | Note: No reason given for no order | | 4 | Special alloy steel forged end rings, 1305 lbs. each (as per drawing) | 297.00 ea. |
| | | | 4 | Special alloy steel forged inside rings, 476 lbs. each (as per drawing) | 164.00 ea. |
| | | | 4 | Special alloy steel forged outside rings, 263 lbs. each (as per drawing) | 132.00 ea. |
| TE 649 | 24 Jan. '40 | Bethlehem Steel, Camden Forge, or any other maker | 4 | Forged steel open hearth carbon steel rotor shafts, rough turned all over, 76,660 lbs. each, 9605 mm. long, (as per drawing) | 9,582.50 ea. |
| TE 650 | 24 Jan. '40 | Camden Forge | 3 | Forged steel open hearth carbon rotor shafts, rough turned all over, 30,505 lbs. each, 7,800 mm. long (as per drawing) | 9,609.00 ea. |

| Inquiry No. | Date | Manufacturer | No. | Product | Price (\$) |
|-------------|-------------|---|-----|---|--------------|
| TE 651 | 2 Feb. '40 | Bethlehem Steel | 2 | Forged steel open hearth carbon shafts rough turned, 19,970 lbs. each, 5,535 mm. long (as per drawing) | 3,448.50 ea. |
| TE 652 | 30 Jan. '40 | | 1 | Forged steel open hearth carbon steel rotor shaft, rough turned, 50,325 lbs., 8,500 mm. long (as per drawing) | 5,548.20 |
| TE 657 | 6 Feb. '40 | Bethlehem Steel (for Manshu Kei Kinzoku) | 16 | Forged steel circular plates 70 mm. thick x 2410 mm. dia. | 1,399.20 ea. |
| | | Note: Various sizes to be used for vacuum vessels of 2,800 Kw mercury rectifiers. | 16 | Forged steel flanges, (ring plates) 90 mm. thick x 2210 mm. inner dia. x 2410 mm. outer dia. | 476.00 ea. |
| | | | 16 | Forged steel flanges (ring plates) 120 mm. thick x 485 mm. inner dia. x 1030 mm. outer dia. | 454.37 ea. |
| TE 661 | 20 Feb. '40 | Camden Forge | 4 | Forged carbon steel open hearth rotor shafts, rough turned, all over leaving 3 mm. finishing margin over the surface; 76,650 lbs. each; 9,605 mm. long. | 9,581.25 ea. |
| TE 662 | 20 Feb. '40 | Bethlehem Steel | 3 | Forged carbon steel rotor shafts 31,185 lbs. each, 7,800 mm. long (as per drawing) | 9,355.50 ea. |

N. Y. #250

| Inquiry No. | Date | Manufacturer | No. | Product | Price (\$) |
|-------------|-------------|--|-----|---|---------------|
| TE 663 | 20 Feb. '40 | Bethlehem Steel | 2 | Forged carbon steel rotor shafts, 22,134 lbs. each; 6,535 mm. long (as per drawing) | 3,652.11 ea. |
| TE 664 | 20 Feb. '40 | Bethlehem Steel | 2 | Forged carbon steel rotor shafts, rough turned; 12,950 lbs. each; 6,110 mm. long (as per drawing) | 2,201.50 ea. |
| TE 666 | 1 Mar. '40 | Camden Forge | 4 | Forged steel rotor shafts, rough turned, 8,675 mm. long (as per drawing) | No price |
| | | | | <u>Note: Revision of TE 588</u> | |
| TE 667 | 6 Mar. '40 | Armco International Corporation; 120 Broadway, New York, N. Y. | 1 | Rolled steel circular plate, 80 mm. thick x 3010 mm. dia. | 533.82 |
| | | | 1 | Rolled steel flange (ring plate) 90 mm. thick x 2780 mm. inner dia. x 3010 mm. outer dia. | 454.88 |
| | | | 1 | Rolled steel flange (ring plate) 125 mm. thick x 600 mm. inner dia. x 1150 mm. outer dia. | 147.40 |
| TE 674 | 19 Mar. '40 | Bethlehem Steel | 2 | Forged steel rotor shafts, 9,620 mm. long x 100 mm. dia.; 112,875 lbs. each (as per drawing) | 29,796.00 ea. |
| | | | 4 | Forged steel retaining rings, 4,935 lbs. each (as per drawing) | 1,954.28 ea. |

| Inquiry No. | Date | Manufacturer | No. | Product | Price (\$) |
|-------------|-------------|---------------------------------|-----|---|--------------|
| TE 675 | 26 Mar. '40 | Bethlehem Steel | 1 | Hollow open hearth nickel steel forged steel rotor shaft, 1380 mm. dia; 4030 mm. long; for turbine generator with smooth finished bore 500 mm. throughout; 91,500 lbs. (as per drawing) | 21,376.00 |
| | | | | <u>Note:</u> 10 to 12 month delay in delivery was anticipated and the inquiry was finally withdrawn on 8 Aug. '40 because no definite delivery date could be set. | |
| TE 683 | 8 June '40 | Camden Forge | 4 | Forged open hearth carbon steel rotor shaft, 70,528 lbs. each, 8,900 mm. long (as per drawing) | 8,758.75 ea. |
| TE 686 | 25 June '40 | Armco International Corporation | 2 | Hot rolled circular steel plates, flame cut from plate, rough machined all over; 60 mm. thick x 1830 mm. dia. (as per drawings) | 340.00 ea. |
| | | | 2 | Hot rolled circular steel plates, flame cut from plate, rough machined all over, 100 mm. thick x 750 mm. dia. (as per drawing) | 116.44 ea. |
| | | | 2 | Hot rolled circular steel flanges, 80 mm. thick x 1650 mm. inner dia. x 1830 mm. outer dia. | 447.02 ea. |

| Inquiry No. | Date | Manufacturer | No. | Product | Price (\$) |
|-------------|---|-------------------|-----|--|------------|
| TE 688 | 1 July '40 | Camden Forge | 1 | Forged steel rotor shaft 8,720 mm. long (as per drawing) | |
| | | | 2 | Forged steel end rings; 7,790 lbs. ea. 1400 mm. outer dia. | 3,778.00 |
| | <u>Note:</u> No quotation could be obtained for the rotor shaft since all companies were busy on U.S. government orders | | | | |
| TE 689 | 4 July '40 | Heppenstall | 1 | Forged steel rotor shaft, 6410 mm. long (as per drawing) | 4,754.00 |
| | | | 2 | Forged steel rings (as per drawing) | 801.97 ea. |
| | <u>Note:</u> Revision of TE 623 | | | | |
| TE 690 | 12 July '40 | Bethlehem Steel | 1 | Forged steel rotor shaft, 148,659 lbs., 11,170 mm. long (as per drawing in T.O. 87) | 23,528.74 |
| | <u>Note:</u> 14 months was required for delivery and hence no order was placed. | | | | |
| TE 691 | 26 July '40 | Bethlehem Steel | 2 | Cast steel rotor bosses, 70,000 lbs. ea. each (as per drawing) | 14,252.00 |
| TE 3884 | 18 Oct, '39 | Kearney & Trecker | 2 | #3H Milwaukee vertical milling machines, metric system, complete with standard equipment. | 14,090.00 |
| | | | | <u>Extras:</u> | |
| | | | 2 | Power feed and power rapid traverse to sliding head | |
| | | | 2 | Cutter arbors, Style B-51B-3-1/2. | |
| | | | 2 | Plain vises 8" | |
| | | | 2 | G.E. motors 7-1/2 HP, AC, 3 ph., 50 cy., 220 v., 1500 RPM, with magnetic switch and push button control. | |

N. Y. #250

| Inquiry No. | Date | Manufacturer | No. | Product | Price (\$) |
|-------------|--------------|---------------------------------|-----|---|------------|
| TE 3885 | 18 Oct. '39 | Gould & Eberhardt | 1 | #12H Universal manufacturing type gear hobbing machine complete with work arbor support, one hob arbor and full equipment to cut both spur and helical gears, arranged for constant speed motor drive through multiple V-belt | 5,870.00 |
| | | | | <u>Extras:</u> | |
| | | | 1 | Automatic infeed mechanism for worm wheel hobbing | |
| | | | 1 | Hob centering gauge | |
| | | | 1 | G.E. 5 HP, AC, 3 ph., 50 cy., 220 v. motor | |
| TE 3886 | 18 Sept. '39 | Van Norman Machine Tool Company | 1 | #12 Universal milling machine, metric system, with power longitudinal feed of table, complete with standard equipment. Electric source - 3 ph., 50 cy., 200 volt. | 3,520.00 |
| | | | | <u>Extra:</u> | |
| | | | 1 | Sub head | |
| | | | 1 | Worm index center, 7-1/2" swing | |
| | | | 1 | Universal index center, 10" swing | |
| | | | 1 | Slotting attachment | |
| | | | 1 | 7-1/2" rotary table | |

N. Y. #250

| Inquiry No. | Date | Manufacturer | No. | Product | Price (\$) |
|-------------|-------------|--|-----|---|------------|
| TE 3894 | 18 Oct. '39 | Kearney & Trecker | 1 | #2 Milwaukee Model H plain milling machine, metric system, complete with standard equipment; mounting starter on machine and wiring to motor. | 4,375.00 |
| | | | | Extras: | |
| | | | 1 | Cutter arbor, Style A-51A18-4 | |
| | | | 1 | Cutter arbor, Style B-51-1/4-B30-4 | |
| | | | 1 | 6" plain vise | |
| | | | 1 | G.E. 5 HP, 3ph., AC, 50 cy., 200 volt motor | |
| TE 8067 | 22 June '39 | Eclipse Aviation Div. of Bendix Aviation Corp., South Bend, Ind. | 2 | Sets engine driven generators, 30 volt, 50 amperes. | 361.00 |

Note: Recommended by Mr. Hioki while in New York. Shibaura Engineering Works to buy as a sample fearing difficulty in obtaining permission for Mukawase-Yunyu.

MITSUBISHI INQUIRIES

| | | | | |
|---------|-----------|---|---|--|
| NY 2768 | 8 May '40 | Morton Mfg. Co. Wm. Sellers & Co. Mesta Machine Co. | 1 | Locomotive frame slotting machine, stroke 550 mm. with a clearance of 900 mm. wide and 600 mm. high. Bed, 9200 mm. |
|---------|-----------|---|---|--|

ATAKA INQUIRIES

| Inquiry No. | Date | Manufacturer | No. | Product | Price (\$) |
|-------------|-------------|--|-----|--|------------|
| 725 | 25 June '40 | F. J. Stokes Machine Co. | 1 | Model DDS-2 press specially constructed for producing magnetite cores, including variable speed drive, motor and special punches and dies. | 8,550.00 |
| | 17 June '40 | Samuel M. Langston 1920 S. 6th St. Camden, New Jersey | 1 | Paper tubing machine | No price |
| | 17 June '40 | Baird Machine Co. Bridgeport, Conn. | 1 | No. 00 to No. 2 "four slide machines" | No price |
| | 17 June '40 | Rea Magnet Wire Co. Fort Wayne, Ind. | 1 | Coil winding machine with still dereeling device | No price |
| | 17 June '40 | Automatic Winding Co. 900 Passaic Avenue East Newark, N.J. | 1 | Perforation machine for coil winding bobbin | No price |
| | 16 June '40 | Artos Engine Co. 2739 S. 28th Street Milwaukee, Wis. | 1 | Wire trimmer and nibbling machine, stripper type GS-6B | No price |
| | 17 June '40 | Condenser Corp. of America, South Plainfield, N. J. | 1 | Paper capacitor winding machine | No price |
| | 13 May '40 | Brown & Sharpe | 1 | V-3 vertical milling machine | No price |
| | | | 1 | #1-A.C. plain milling machine | |
| | | | 1 | #1-A.V. vertical milling machine | |

N. Y. #250

| Inquiry No. | Date | Manufacturer | No. | Product | Price (\$) |
|--------------|-------------|--|-----|---|------------|
| 725 (Cont'd) | 18 Aug. '40 | Baird | 1 | #2 standard automatic 4-slide forming machine with extra attachments. | No price |
| | | | 1 | #00 standard automatic 4-slide forming machine | |
| | | | 1 | #1001 multiple hole piercing machine with extra equipment | |
| | | | 1 | Single belt type "WA" tube winder with extra equipment | |
| | | | 1 | Type CS-#6B Artos automatic measuring, cutting and stripping machine | |
| | | | 1 | Tension unit (as in photograph) | |
| 6232 | 2 Oct. '39 | Gleason Works (for Tsurumi, Kaiyagawa-Ken) | 2 | 12" straight bevel gear generator, metric system, with full standard equipment. | 18,037.52 |

OKURA INQUIRIES

| | | | | |
|---------|-------------|--|-------------------------------|-------------------------|
| M 23802 | 23 July '40 | Jacob Manufacturing Company, Hartford, Conn. | 33 Chucks, Nos. 1, 2, & 2-1/2 | About 375.00 (1500 Yen) |
|---------|-------------|--|-------------------------------|-------------------------|

2. Orders

Note: All orders were shipped unless otherwise specified, and shipping dates are given when known.

MITSUI ORDERS

| Order No. | Date | Manufacturer | No. Product | Price (\$) |
|----------------|-------------|-----------------|--|------------|
| 59 E.O.1923 | 21 Oct. '39 | Bethlehem Steel | 12 Forged steel circular plates 80 mm. thick x 1040 mm. dia. | 6,782.00 |
| | | | 12 Forged steel flanges (ring plates) 125 mm. thick, 580 mm. inner dia., 1200 mm. outer dia. | |

Note: Shipment was made in two parts: on 29 February '40 and 22 March '40; and was intended for vacuum vessels of 3600 Kw mercury rectifiers of Nippon Aluminum K.K. of Karenko, Formosa.

| | | | | |
|----------------|-------------|-----------------|---|----------|
| 60 E.O.1924 | 21 Oct. '39 | Bethlehem Steel | 6 Forged steel circular plates, 70 mm. thick x 2710 mm. dia. | No price |
| | | | 6 Forged steel circular plates, 80 mm. thick x 920 mm. dia. | |
| | | | 6 Forged steel flanges (ring plates), 100 mm. thick, 2250 mm. inner dia., 2710 mm. outer dia. | |
| | | | 6 Forged steel flanges (ring plates), 120 mm. thick, 480 mm. inner dia., 1030 mm. outer dia. | |

Note: For vacuum vessels of 3000 Kw mercury rectifiers for Nippon Soda K.K. There is no indication in the file to show that this order was shipped.

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price (\$) |
|----------------|--|--|-----|---|------------|
| 66 E.O.2337 | 13 Dec. '39 Shipped: 31 July '40 | Bethlehem Steel (for Seisan Kagaku K.K.) | 8 | Forged steel circular plates, 80 mm. thick x 3010 mm. dia. | 20,493.00 |
| | | | 8 | Flanges (ring plates) 13 mm. thick, 2760 mm. inner dia., 3010 mm. outer dia. | |

Note: For 4,800 Kw mercury rectifiers. It is probable that this plant is in Korea as the draft was to be drawn on Mitsui Bussan Kaisha, Keijo.

| | | | | | |
|----------------|---------------------------------------|-----------------|---|--|-----------|
| 74 E.O.2463 | 3 Feb. '40 Shipped: 17 Nov. '40 | Bethlehem Steel | 2 | Forged steel rotor shafts, rough turned all over to dimensions shown on customer's drawing #K-1103004. | 74,113.00 |
| | | | 2 | Forged steel rotor shafts, rough turned all over to dimensions shown on customer's drawing K-1003013. | |
| | | | 4 | Forged steel rotor spider rims, rough turned all over to dimensions shown on customer's drawing K-1103008, Part 1. | |
| | | | 2 | Forged steel rotor spider rims, rough turned all over to the dimensions shown on customer's drawing K-1103008, Part 2. | |
| | | | 8 | Forged steel rotor spider rims, rough turned all over to dimensions shown on customer's drawing K-1003014. | |

Note: Of the last item, 4 were cancelled because the needs of the American Government priorities prevented their manufacture.

| Order No. | Date | Manufacturer | No. | Product | Price (\$) |
|-----------------|--|--|-----|---|------------|
| 76 E.O.2511 | 31 Jan. '40 Shipped: 10 Aug. '40 | Bethlehem Steel (for Nippon Hassoden K.K.) | 1 | Open hearth nickel molybdenum forged alloy steel rotor shaft, rough turned all over to dimensions shown on drawing K-868038 | 11,546.00 |
| | | | 2 | Open hearth nickel chrome molybdenum forged alloy steel end rings, rough turned all over to dimensions shown on drawing K-173696. | |
| | | | 1 | Open hearth nickel forged alloy steel fan spider rim, rough turned all over to dimensions shown on drawing K-868041. (Blueprints in file) | |
| 80 E.O.2505 | 5 Feb. '40 Shipped: 30 April '40 | Heppenstall | 2 | Forged carbon steel rotor shafts | 7,142.18 |
| | | | 2 | Forged spider rims | |
| 88 E.O.2856 | 14 Mar. '40 Shipped: 9 Apr. '40 | Camden Forge (For Tokyo Dento, Akimoto) | 2 | Open hearth forged carbon steel rough turned rotor shafts | 10,011.77 |
| | | | 12 | Forged steel spider rims, rough turned and rough bored. (Drawing in file) | |
| 111 E.O.2997 | 3 May '40 Shipped: 20 July '40 | Camden Forge (for Sumitomo Kinzoku Kogyo K.K.) | 2 | Open hearth forged carbon steel rotor spider rims, rough turned and rough bored, adding 3 mm. finishing allowance to dimensions given on buyer's drawing 210251-A2, Ryaku-201, attached to Inquiry 629, 14 Nov. '39. Weight about 7000 lbs. | 1,066.00 |

Note: Probably for locomotive wheels

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price (\$) |
|-----------------|--------------------------------------|-----------------|-----|---|------------|
| 112 E.O.3009 | 14 May '40 Shipped: 8 Oct. '40 | Bethlehem Steel | 2 | Forged steel circular plates, annealed and rough turned all over to dimensions 60 mm. thick, 2110 mm. dia, gas tight in every respect for vacuum vessels of mercury rectifiers. | 2,911.00 |

Note: This may be a correction of Item 30, p.37 of Banks' report, or perhaps a different order.

| | | | | | |
|-----------------|---|---------------------------------|---|---|--------|
| 125 E.O.3134 | 13 Sept. '40 Shipped: 23 Oct. '40 | Armco International Corporation | 2 | Hot rolled steel flanges, flame cut from plate, rough machined, 110 mm. thick, 2450 mm. outer dia., 95-3/4" inner dia. gas cut in center. | 980.70 |
|-----------------|---|---------------------------------|---|---|--------|

Note: There was a mistake. Customer wanted circular plates, 70 mm. thick, 2710 mm. dia., but agreed to accept the flanges provided the order would read "plates" to conform to the letter of credit.

| | | | | | |
|------------------|------------|------------------------------|---|---|-----------|
| 3892 E.O.3233 | 1 Oct. '40 | Barrett Machine Tool Company | 1 | #3 horizontal boring machine, 6" dia. boring bar complete with all standard equipment and all electrical equipment for 220 volt, 3 phase, 60 cycle current. | 13,050.00 |
|------------------|------------|------------------------------|---|---|-----------|

Note: Export license for this machine was rejected by the State Department on 28 February '41.

N. Y. #250

| Order No. | Date | Manufacturer | No. | Product | Price (\$) |
|------------------|--|--------------|-----|---|------------|
| 3889 E.O.3177 | 10 Sept. '40 Cancelled: 2 Jan. '41 | Norton & Co. | 1 | 10"x24"hydraulic surface grinding machine with automatic cross feed complete with standard equipment. <u>Equipment:</u> 1 Wheel guard including coolant pipes 1 Wheel sleeve 1 Diamond tool holder without diamond 2 Grinding wheels 10" x 1-1/2" x 3" 1 Set wrenches 1 Set splash guards 1 Motor pulley 1 Spindle drive belt <u>Extra:</u> 1 7-1/2 HP,1000 RPM wheel and pump drive motor for AC, 3 ph., 50 cy., 200 volt, ball bearing spindle 1 10" x 24"magnetic chuck (Walker) for DC, 220 volt. | 4,740.50 |
| 3905 | 22 Oct. '40 | Norton & Co. | 1 | 6"x18" hydraulic surface grinding machine, vertical wheel spindle arrangement, complete with standard equipment, available electric current 3 ph., 50 cy., 200 volt. | 1,486.75 |
| 3905 Add. | | | 1 | 6"x18" Walker magnetic chuck, DC, 220 volt | 115.00 |
| | | | 25 | 6"x3"x3" 5/8" rim 3830G grinding wheels | |
| | | | 25 | 6"x3"x3" 5/8" rim 3816K grinding wheels | |
| | | | 25 | 6"x3"x3" 5/8" rim 3816H grinding wheels | |

N. Y. #250

ATAKA ORDERS

| Order No. | Date | Manufacturer | No. | Product | Price (\$) |
|-----------|------------|---|-----|---|------------|
| 6273 | 9 Oct. '39 | Brown & Sharpe (for Matsuda Div. [Matsuda Shisha] at Kawasaki) | 4 | #2 Vertical milling machines, light type, motor driven, metric system, with regular equipment and fitted with motor suitable for 220 volt, 3 phase, 50 cycle, AC. | 14,210.50 |
| | | | | <u>Extras:</u> | |
| | | | 4 | Coolant system fitted with motor for 220 volt, 3 ph., 50 cy., AC. | |
| | | | 4 | Turret type spindle stops with dial test indicator | |
| | | | 4 | 10" rotary attachments, hand feed | |
| | | | 2 | #225 swivel vises | |
| | | | 4 | #45 adaptors | |
| 6742 | 1 Nov. '40 | Brown & Sharpe | 10 | Micrometer calipers | 172.11 |
| | | | 1 | Screw thread micro- meter caliper | |
| | | | 1 | Adjustable square | |
| | | | 20 | Micrometer calipers | |
| 6743 | 1 Nov. '40 | Brown & Sharpe | 1 | Inside micrometer caliper | 53.52 |
| | | | 5 | Micrometer calipers | |
| | | | 1 | Micrometer caliper | |

Note: Export license was
cancelled by the
State Department
on 19 Oct. '40.

N. Y. #250

OKURA ORDERS

| <u>Order No.</u> | <u>Date</u> | <u>Manufacturer</u> | <u>No.</u> | <u>Product</u> | <u>Price (\$)</u> |
|------------------|-------------|---------------------|------------|---|-------------------|
| S-517 | 19 Mar. '40 | Pratt & Whitney | 2 | Metric system, Model C lathes, 12" x 30" with lead screw reversing mechanism with automatic stop in both directions of carriage travel, cam lock spindle nose and 10" four jaw independent chuck with 3 HP motor and controls for 200 volts, 3 phase, 50 cycles, AC, metric equipment, cutter coolant pump and fittings | 9,300.00 |
| S-517 Add. | | Westinghouse | 2 | 3 HP type CS squirrel cage general purpose motors, 3 phase, 50 cycles, 200 volts, 1500 RPM, sleeve bearing, 40° C rise open | 113.96 |
| | | | 2 | Class 11-200-S1 non-reversing magnetic line-starter, less push-button station. | |

Note: Cancelled because of inability to obtain State Department license.

G. ISHIKAWAJIMA SHIBAURA TURBINE COMPANY*Orders

Note: All orders were shipped unless otherwise specified and shipping dates are given when known.

mitsui orders

| Order No. | Date | Manufacturer | No. | Product | Price (\$) |
|------------------|---|--|-----|--|------------|
| 71 | 11 Jan. '40 Shipped: 1 Mar. '40 | Kearney & Trecker (for Manshu Dengyo Kaisha) | 3 | Nickel steel turbine shafts, rough finished to dimensions given in buyer's drawing No. TA-016810, Fig. 1, perfectly heat treated so as to obtain the physical properties given on the drawing | 13,375.00 |
| | | | 6 | Nickel chrome turbine discs | |
| | | | 33 | Semi mild steel turbine discs | |
| 123 E.O. 3170 | 5 Sept. '40 Shipped: 25 Sept. '40 | Heppenstall | 1 | Forged steel turbine shaft, rough finished to dimensions given in buyer's drawing No. TA-016810, Fig. 1, perfectly heat treated so as to obtain the physical properties given on the drawings. | 4,848.00 |
| | | | 2 | Nickel chrome steel turbine discs | |
| | | | 11 | Semi mild steel turbine discs. | |

* Located in the Tsurumi Compound (Molting Report³, p. 70)

N. Y. #250

| Order No. | Date | Manufacturer | No. Product | Price (\$) |
|---|-------------|---|--|------------|
| T.O. missing M.E. 2174 T.E. 634 Pro-forma Invoice No. 1287. | 18 Dec. '39 | Globe Steel Tube Company, 60 East 42 Street, New York, N. Y. | <u>10,474 meters</u> 101 mm. O.D. 93 mm. I.D. 6000 mm. long | 9,975.62 |
| | | | <u>9,875 meters</u> 87 mm. O.D. 77 mm. I.D. 6700 mm. long | 10,535.90 |
| | | | <u>4,504 meters</u> 82.6 mm. O.D. 69.6 mm. I.D. 10,000 mm. long | 5,758.59 |
| | | | <u>5,739 meters</u> 82.6 mm. O.D. 72.6 mm. I.D. 10,000 mm. long | 6,072.34 |
| | | | <u>Circulating Pipes</u> <u>5,161 meters</u> 110 mm. O.D. 100 mm. I.D. 10,000 mm. long | 7,641.17 |
| | | | <u>5,112 meters</u> 94.6 mm. O.D. 82.6 mm. I.D. 10,000 mm. long | 7,145.11 |
| | | | <u>Superheater Tubes</u> <u>14,064 meters</u> 38 mm. O.D. 31 mm. I.D. 10,000 mm. long | 5,181.16 |
| | | | <u>7,559 meters</u> 50 mm. O.D. 40 mm. I.D. 10,000 mm. long | 4,915.66 |
| | | | <u>Main Steam Pipe</u> 100 mm. O.D. 94.5 mm. I.D. 752 meters long | 631.22 |

NEW YORK

N. Y. #250

MITSUBISHI ORDERS

| Order No. | Date | Manufacturer | No. Product | Price (\$) |
|-----------|------|--------------|-------------|------------|
|-----------|------|--------------|-------------|------------|

| | | | | |
|--------|--------------|-------------------|---|----------|
| T 3308 | 10 Oct. 1938 | Kearney & Trecker | 1 #4K Milwaukee plain milling machine with equipment and extras | 6,118.74 |
|--------|--------------|-------------------|---|----------|

| | | | | |
|-------------|-------------|------------|---|--------|
| T 3308 Add. | 5 Dec. 1939 | Int. G. E. | 1 15 HP, 1500 RPM 3 phase, 50 cycle, 220 volt, motor and control. | 120.00 |
|-------------|-------------|------------|---|--------|

NOTES

1. By Eugene Kline and Gilbert Collins of the New York Regional Office of the Securities and Exchange Commission, dated 13 April 1943. This report is very brief, about 20 lines. It constitutes hardly more than a covering note for the 6 important exhibits annexed which give a detailed description of the proposed new rolling mill factory to be erected in the Tsurumi compound by SHIBAURA and UNITED ENGINEERING & FOUNDRY COMPANY of Pittsburgh, Pa. (discussed in PART ONE herein). It is based only upon a preliminary examination of the Japanese files from which this report is drawn.
2. By Don H. Banks of the Economic Warfare Section, Department of Justice New York, N. Y. (#3177, NY #204, dated 13 August 1943). This report is limited to data obtained solely from the files of the four Japanese companies mentioned concerning "inquiries and orders received from Tokyo for machine tools and other equipment for the various plants which constitute SHIBAURA ENGINEERING WORKS" (ib. page 1). Since the date of his report, considerable more data has been unearthed from those files, which new material is reported in PART FOUR herein.
3. By A.S.B. Nolting of the Economic Warfare Section, Department of Justice, New York, N. Y. (NY #236, dated 23 November 1943). It is based upon information obtained from the files of International General Electric Company and from interviews with its officers.
4. Source, Mitsui files, Tokyo Order #2415, 14 July 1939.
5. See Leo H. Kuhn's REPORT ON SHOWA STEEL WORKS COMPANY, ANZAN, MANCHURIA, 15 March, 1943, Economic Warfare Section, Department of Justice: about Brassert's activities, Page 26; about Aikawa, Page 3.
6. Source, Mitsui files, M.F. 2136, Inq. 9748, 1 July 1939.
7. Report by Leslie H. Standlee, KAWASAKI ZOSENJO (KAWASAKI DOCKYARD) KOBE, 22 October 1943, NY #221, Economic Warfare Section, Department of Justice, Pages 2-3 and Exhibit B.
8. From an interview with C.M. Muehnic, an official of UNITED ENGINEERING & FOUNDRY COMPANY, Pittsburgh, Pa., on 20 December 1943.

9. This order covers also a second identical lathe for Hanshin Iron Works at \$3,500, also to be used with similar Shibaura motor,
10. This may be the same order as in Banks' Report, p. 17, #16, except since shipping date there given is 28 February 1938, this may be a re-order.
11. This order may be the same item as in Banks' Report, p. 22, #5, but there is some ambiguity.
12. From letter and enclosures of Farrel-Birmingham Company, Inc., Ansonia, Conn. (Carl Hitchcock, Vice President) dated 31 December 1943, to the Foreign Economic Administration in New York in response to an inquiry.

REFERENCE MATERIAL

Reports of the Economic Warfare Section, Department of Justice, cited herein as sources or as reference, besides those described in the NOTES;

Report on "Shibaura Engineering Works, Tsurumi," by R. A. Nitschke, Antitrust Division, #2387, Chicago, dated 2 March 1943. This gives location and minute construction details on buildings in the Tsurumi Compound in 1925.

Report on "Mitsui Machine Tool Company, or Toyo Kosaku Kikai K. K., Okekawa, Japan," by Don H. Banks, War Division, New York, dated 4 August 1943, NY-199. This gives details of equipment bought in this country and production plans for a company to make Norton grinders, which may be the same concern as the "Grinder Company", a subsidiary of Tokyo Shibaura.

Report on "Japanese Machine Tool Industry, History and Development," by R. A. Nitschke, Antitrust Division, #2830, Chicago, dated 30 April 1943. This discusses, among others, the Shibaura Machine Tool Company.

APPENDIX 1.

Agreement Between Shibaura Engineering Works, Ltd. and
United Engineering & Foundry Co. of March 1939

A G R E E M E N T

This Agreement entered into this 9th day of March 1939, by and between SHIBAURA ENGINEERING WORKS, a corporation of Tokio, Japan, (hereinafter referred to as "Shibaura") and UNITED ENGINEERING & FOUNDRY COMPANY, a corporation of Pittsburgh, Pennsylvania, in the United States, (hereinafter referred to as "United")

W I T N E S S E T H:

WHEREAS, United is engaged in the business of manufacturing and constructing rolling mill machinery and other machinery products, and has heretofore carried on part of its business in its plant at Wooster, Ohio, and

WHEREAS, Shibaura has proposed the organization of a corporation in Japan to acquire the Wooster plant of United for the use of the new company in Japan in carrying on its business, and is desirous on behalf of the new company to enter into an agreement with United to make available to the new company United's engineering experience to the extent hereinafter defined, and

WHEREAS, United is willing to transfer its Wooster plant and its engineering experience as hereinafter set forth, in return for shares of stock in the new company to be organized, and

WHEREAS, it is understood and agreed that the "Wooster plant", as the term is used throughout this Agreement consists only of the equipment and items shown on the blue-print, G-80515, attached hereto,

NOW, THEREFORE, it is agreed by and between the parties hereto as follows:

1. Shibaura will, with the consent and approval of the Japanese Government, organize and complete the organization prior to the 31st day of August, 1939, of a new corporation in Japan under the name of "Shibaura-United", or some other name that may be agreeable to both Shibaura and United, for the purpose of acquiring the Wooster plant and erecting and operating the plant in Japan. The new company will have a total capitalization of Yen 16,000,000 with 320,000 shares of stock having a par value of Yen 50. This capitalization is deemed sufficient to provide for the acquisition (by the transfer to United of shares of stock of the new company in the amounts and at the times as hereafter provided) of the Wooster plant of United, together with the engineering assistance of United, to acquire a suitable site in Japan for the operation of the new company, and to erect the Wooster plant thereon, and to acquire such other equipment as may be deemed necessary or advisable, and to provide cash sufficient to carry on the business of the new company.

2. The constitution or charter of the new company and its by-laws or rules governing the company and its stockholders will be made satisfactory to United and its counsel, not only with respect to the financial set-up but in all other respects. It has been suggested that the charter and by-laws of Shibaura, in which the International General Electric Company is interested, furnish a satisfactory model for the new company, a copy of the charter and by-laws of Shibaura will be given to United for its consideration.

3. United agrees to transfer its Wooster plant in exchange for 56,800 shares of stock in the new company and Shibaura agrees to cause the new company immediately upon its organization to transfer and deliver to United the said number of shares.

United agrees to furnish engineering service to the new company as hereinafter provided and in return therefore and in payment thereof Shibaura will cause the new company to issue to United on the 15th day of January 1940 and on the same date in each succeeding year for a total period of ten years, 10,000 shares of the stock of the new company.

All of the above stock to be delivered to United in Pittsburgh free and discharged of any Japanese tax, duty or impost thereon.

4. Shibaura will immediately upon the organization of the new company pay to the new company in cash yen 8,160,000 in exchange for 163,200 shares of stock of the new company constituting 51% of the total authorized shares thereof and Shibaura will cause the new company to set aside and reserve 100,000 shares of the total authorized shares of stock of the new company for future issuance and delivery to United in accordance with the provisions of paragraph three hereof, United will have no objection to any increase in the capitalization of the new company in excess of yen 16,000,000 which may be deemed necessary or advisable to provide capital for the carrying on of its business, provided the new stock is issued and paid for in cash at par and that United has the right to subscribe for and receive its pro-rata share of such increase.

It is further agreed that Shibaura will endeavor to secure any necessary consent from the Japanese authorities to permit the withdrawal from Japan in American exchange of any dividends declared on any shares of stock at any time hereafter held by United in the new company.

5. It is agreed that any stock of the new company received by United now or hereafter shall not, without the consent of United, be outranked by or made subject to any other stock of the company having a preferential standing, nor shall the company without consultation and the mutual agreement of both parties, create any indebtedness secured by any lien on any of the property of the new company.

6. It is understood and agreed that United will be entitled to representation by at least three directors of its own choosing on the Board of Directors of the new company.

7. United will, at the expense of the new company as hereinafter provided, recondition the tools, dismantle, box and pack for ocean shipment and deliver its Wooster plant at such place within the City of New York as may be designated by the new company or by Shibaura, and Shibaura agrees to cause the new company to transport the Wooster plant at the new company's expense from the place of delivery within the City of New York, to Japan, and there to erect the plant in a proper manner and to the satisfaction of United, and upon a site acceptable to United and Shibaura.

8. The reconditioning of tools, the dismantling, boxing and shipping of the Wooster plant F.A.S. New York (the cost of which United agrees will not exceed \$200,000.00) shall be proceeded with promptly after the ratification hereof by the Boards of Directors of Shibaura and United, as provided for in paragraph 21 hereof), and after the new company or Shibaura has given United shipping instructions. The cost thereof shall be borne by the new company, and the sum of \$200,000.00 for these purposes shall be advanced and turned over to United upon the effective date of this agreement. United will accept in place of cash four notes bearing the effective date of this agreement, each in the face amount of \$50,000.00 with interest at the rate of 5%, and payable in three, six, nine and twelve months' time at the First National Bank at Pittsburgh, Pennsylvania. The maker of these notes shall be Shibaura.

9. United agrees to send to Japan during the construction of and initial stages of the operation of the new company, such experts as may be requested and are available to United to assist in the proper erection of the plant and the operation thereof. The traveling expenses to destination and return, as well as salaries and living expenses are to be paid by the new company.

10. The obligation of United under this agreement with respect to the transfer of its Wooster plant to the new company shall be deemed fully carried out and discharged when said Wooster plant, as herein defined, is transported F. A. S. New York ready for delivery to the new company. Shibaura agrees on behalf of the new company, that United shall be given by Shibaura or its agent, at least five weeks' notice in advance of the ocean transportation available, and Shibaura will arrange for the proper insurance, transportation, storage and care of the Wooster plant at all times after its delivery by United F. A. S. New York and until the plant is erected in Japan.

11. If for any reason whatsoever the new company, or any one on its behalf, is unable to, or does not give shipping instructions to United as hereinbefore provided, or accept delivery of the plant F. A. S. New York or is unable to or does not transport the Wooster plant to Japan, or is unable to or does not cause the terms of this agreement, insofar as the new company and Shibaura are required to perform the same, to be fully carried out and performed, Shibaura agrees to pay to United as liquidated damages, not later than one year from the date of this agreement, in the United States and in the money thereof, the sum of ONE MILLION DOLLARS (\$1,000,000.00) and Shibaura will not be excused from said payment, by reason of war, any embargo or other governmental order preventing the shipment of the plant or any loss, destruction or delay thereof in transit. It is understood, however, that if any embargo is declared or put into effect by either Japan or the United States prior to the dismantling and/or shipment by United or any part of the Wooster plant, then in that event United will release Shibaura from the payment of the ONE MILLION DOLLARS (\$1,000,000.00) as herein provided to be paid by Shibaura to United as liquidated damages, retaining as its liquidated damages in such event, the sum of TWO HUNDRED THOUSAND DOLLARS (\$200,000.00) to be paid to United under the provisions of the eighth paragraph, and Shibaura agrees that the said sum of TWO HUNDRED THOUSAND DOLLARS (\$200,000.00) may be so retained by United.

12. United will furnish the new company for a period of twelve and a half years from the date of the organization of the new company, for the sole use of the new company in Japan, China, Manchukuo, but not elsewhere, with blue-prints of existing drawings of rolling mill machinery which United has theretofore designed and built or may design and build in the future, and United will also furnish from time to time to the new company as requested available engineering information and technical data. Upon request by the new company, United will make new drawings of any unit for which United has not previously made drawings, and in such instances the new company agrees to pay to United in American money in the United States the cost of such changes and new drawings plus 10% of such cost.

At the expiration of the twelve and a half year period, United and the new company will discuss a mutually satisfactory renewal of the existing agreement with respect to engineering services and patents, for a further period.

It is understood and agreed that United will not be required to furnish under the above provisions any blue-prints, drawings, engineering information or technical data, except to the extent that the same may be necessary to the new company in connection with firm inquiries from prospective customers, and also only to the extent that United is not now or may not hereafter be prohibited from doing so by any law, order or decree of the United States of America or governmental agency thereof. All impost duties, taxes and charges of like nature including mailing and express charges, in connection with any drawings, blue-prints, engineering information or technical data furnished the new company by United will be paid by the new company.

It is also understood and agreed that United is not to be held in any way responsible for any inaccuracy in any of the blue-prints, drawings, engineering information or technical data furnished under the terms of this agreement, and Shibauro covenants and agrees, on behalf of the new company, that such blue-prints, drawings, engineering information and technical data as may at any time be furnished by United to the new company, will be for the new company's sole and exclusive use in the manufacture of rolling mill machinery and machinery products in Japan, and shall not be sold, transferred or disclosed in any manner to others.

13. The new company will have the free but non-exclusive right to furnish for use in Japan, China and Manchukuo (but not in the British Empire or anywhere outside of Japan, China and Manchukuo) any of United's products, including rolling mills, rolling mill machinery and auxiliary equipment of the type manufactured and produced by United, and also including 4-high hot and cold strip mills and auxiliary equipment.

Until the end of the twelve and a half year period and any renewal thereof United will inform the new company of all inquiries it may receive direct from prospective purchasers in said territory and will confer with the new company with respect to quotations to be made or action to be taken with respect thereto, and United will advise the new company of all patents and applications for patents in Japan, China, and Manchukuo which it now owns, controls, or under which it possesses transferable patent rights, and upon written request to do so agrees to grant to the new company a non-exclusive license thereunder in each of said countries. The new company shall pay all costs in the way of taxes, and other expense which may be required for the maintenance of the patents under which a license is granted.

Otherwise the licenses shall be subject only to such royalty or other payments (not including costs of prosecuting the patents) which United may have paid or be required to pay in connection with the granting of the license.

14. With respect to any future inventions which reasonably may be useful to the new company and upon which inventions patent rights are sought by United in the United States of America, United will during the said twelve and a half year period or any extension thereof, communicate the subject matter of any such invention to the new company and extend to the new company the right to acquire a license thereunder similar to the license defined in the preceding paragraph hereof, providing the new company within six months after it receives any such communications notifies United that it elects to take a license and file an application for a patent thereon at its own expense, but in United's name. If the new company elects to discontinue the prosecution of any such application filed, or the maintenance of any patent under which a license is granted, or to surrender any license granted, it may do so, providing it shall give United written notice thereof in sufficient time to permit the latter to take over such prosecution or pay the required taxes or pay the required workings to obtain and maintain the same for United's sole benefit.

Should the new company furnish United with proof of infringement of any patent under which it is licensed pursuant to this agreement and United fails within three months thereafter to bring suit to stop such infringement, then the new company shall have the right to do so at its own expense and to retain for its own behalf any recoveries which may be had in any such suit, and United, but without expense to itself, will assist the new company in all reasonable ways necessary to the carrying out of any such suits which the new company may instigate.

United shall inform the new company of any negotiations with outside parties which might result in the acquisition of any patent rights deemed useful to the new company, and if requested to do so, shall assist the new company to obtain similar rights in China, Japan, and Manchukuo on the best possible terms, of if any such patent rights in the said countries are obtained by United, a license under the same shall be offered to the new company on terms no less favorable than those under which they are acquired.

No license shall be granted by the new company under any license granted it by United without United's written consent, nor shall any license granted the new company by United be assignable without United's written consent.

The new company will communicate to United any new invention or improvement relating to United's field of operation which the new company may acquire or its employees may invent, and if requested to do so, shall assign or cause to be assigned to United any and all patent rights thereon within the United States of America and shall grant to United a free, non-exclusive license thereunder for its use in such other countries or territories as it may desire, and such license shall extend to United the same privileges for its associate companies and subsidiaries.

At the end of the twelve and a half year period as herein before provided for, or at the end of any extension thereof mutually agreed to by Shibaumi and United, or in the event of the prior voluntary or involuntary dissolution of the new company, all license or rights granted to the new company pursuant to the terms of this agreement, and all duties and obligations of United hereunder, shall terminate, provided, however, that any rights theretofore granted by the new company to any other party shall not be affected by such termination, but any royalties or any other compensations payable to the new company under any sub-license or other arrangements theretofore made by the new company shall become payable to United.

Both parties hereto shall require the proper persons and corporate officers to promptly sign and execute all patent applications and other papers that may be necessary or desirable to carry out the provisions of this agreement.

15. United will grant admission to its plants to engineers of the new company and give them an opportunity of becoming acquainted with its methods of manufacturing, working, estimating, organization and like matters.

16. It is agreed that the new company will not sublet to any person whatsoever, other than affiliated companies, any portion of any contracts entered into by the new company, without the consent in writing of United, and it is agreed that in connection with any large contracts taken by the new company, a proportion of the equipment to be built under the terms of such contracts will be offered to United to be built by United (if it accepts the offer) in its own shops in the United States.

17. The right to receive, the ownership, control and voting rights of United in the new company stock which it may at any time hereafter hold or be entitled to receive, and the right to dividends shall not be affected in any way by reason of any future law of the United States or future order or decree of any governmental agency thereon preventing United from furnishing any blue-prints, drawings, engineering information and technical data required under the terms hereof.

18. It is further understood and agreed that if at any time hereafter United's rights as a stockholder in the new company shall be sequestered or for any reason not fully recognized, or if for any reason United is denied the right to receive in America and in American money the amount of any dividends declared by the new company, then United shall not be required, during the period of such sequestration, non-recognition or suspension of dividend payments, to furnish any drawings, blue-prints, information or data, disclose any inventions, or grant any licenses thereunder which otherwise would be required to be furnished, disclosed or granted by United to the new company under the terms of this agreement, and all licenses theretofore granted by United under the terms of this agreement shall likewise be suspended during such period.

In the event of any of such contingencies arising, the parties hereto will consult in order to arrive at a modus operandi that will be mutually agreeable.

19. During the period of twelve and a half years herein provided for, or any extension thereof, United will not enter into any similar agreement with any other firm or corporation, or grant to any competitor of the new company any licenses, similar as to rights or territory, or furnish to such competitor for use in the same territory any similar engineering services.

20. The within agreement shall be interpreted in accordance with the laws of the Commonwealth of Pennsylvania, United States of America.

21. The within agreement is made subject to the approval or ratification of the Board of Directors of each of the parties hereto, and in the event that such approval has not been obtained at the time of the execution thereof, the within agreement shall not become operative until so ratified, and each of the parties hereto will furnish the other with a certified copy of any resolution of the Board of Directors approving or ratifying the within agreement.

22. Shibauro agrees to cause the new company, immediately upon the organization thereof, to ratify, approve and adopt this agreement and become bound thereby as fully and effectively as if an original party thereto.

23. It is understood that the interests of Shibauro under this agreement may be assigned to any successor thereof.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed in their behalf respectively by their proper officers and have caused their respective corporate seals to be affixed hereto the day and year first above written.

SHIBAURA ENGINEERING WORKS

Attest:

BY K. Yamaguchi

S. Noguchi

UNITED ENGINEERING & FOUNDRY
COMPANY

Attest:

BY Geo. T. Ladd

K.P. Gardner

APPENDIX IIMachine Tool Schedule of the Wooster PlantSold and Delivered Under Contract of9 March 1933 Between Shibaura EngineeringWorks Ltd. and United Engineering andFoundry Company of Pittsburgh, Penna.

Note: Although this list has already been reported, in REPORT ON SHIBAURA UNITED ENGINEERING by Eugene Kline and Gilbert Collins (13 April 1943, Security & Exchange Commission, New York Regional Office) it is appended here because it was an integral part of the United Engineering - Shibaura contract.

| <u>MACHINE NAME</u> | <u>PRICE IN YEN</u> |
|---|---------------------|
| <u>Planers</u> | |
| Niles B. Pond - 144" x 12' x 30' | ¥ 431,290 |
| Niles B. Pond - 120" x 10' x 24' | 196,820 |
| Niles B. Pond - 72" x 6' x 22' | 64,830 |
| Pond Machine Tool - 48" x 4' x 20' | 33,580 |
| Niles B. Pond - 48" x 4' x 20' | 20,840 |
| Niles B. Pond - 36" x 36" x 16'8" | 14,470 |
| Putnam Machine - 36" x 36" x 16'0" | 16,210 |
| Putnam Machine - 30" x 30" x 10'0" | 6,940 |
| Putnam Machine - 30" x 30" x 10'0" | 5,790 |
| Niles Tool Wks. - 96" x 96" x 34'0" | 122,740 |
| <u>Lathes</u> | |
| Bridgeport Machine Tool - 42" x 36'0" | 20,840 |
| Niles Bement Pond - 36" x 18'0" | 10,420 |
| New Haven Mfg. Co. - 36" x 14'0" | 5,670 |
| New Haven Mfg. Co. - 36" x 16'0" | 5,680 |
| Pond Machine Tool - 36" x 27'0" | 12,150 |
| Niles Bement Pond - 30" x 20'0", engine | 12,150 |
| Niles Bement Pond - 26" x 16'0", engine | 5,680 |

| MACHINE NAME | PRICE IN YEN |
|--|--------------|
| <u>Lathes</u> | |
| Niles Bement Pond - 26" x 16'0", engine | ¥ 5,680 |
| R. K. LeBlond - 24" x 12'0", engine | 5,020 |
| Schumaker - 24" x 18'0", engine | 3,640 |
| Draper Machine - 20" x 10'0", engine | 2,030 |
| Lodge & Shipley - 20" x 12'0", engine | 2,030 |
| F. E. Reed - 20" x 10'0", engine | 1,600 |
| Fifield Engineering - 30" x 12', engine | 2,320 |
| Rockford Latho - 18" x 8', engine | 1,450 |
| Hendey Machine - 18" x 8', engine | 1,270 |
| Niles Bement Pond - 72" x 42', engine | 67,150 |
| LeBlond - 16" x 6', engine | 1,740 |
| Bridgeport Tool - 36" x 18', engine | 17,650 |
| Monarch Tool - 18" x 72", engine | 6,360 |
| F. E. Reed - 10" x 4', engine | 870 |
| Pratt & Whitney - 16" x 8', engine | 3,760 |
| Pratt & Whitney - 16" x 8', engine | 3,760 |
| Hamilton Machine - 22" x 10', engine | 2,320 |
| Johnson & Lamson - 2" x 24", turret | 3,160 |
| Libby Turret - 4.1/2" x 26", turret | 7,520 |
| Cincinnati Acme - 17" x 4.1/2", turret | 5,900 |
| Libby Turret - 32" x 10 1/4", turret | 15,800 |
| <u>Horizontal Boring Mills</u> | |
| Bement Niles - 5.1/2" Spindle, 6' Vertical Travel | 28,940 |
| Niles Tool Wks. - 6.1/2" Spindle, 8' Vertical Travel | 49,200 |
| Betts Machine - 3 3/4" Spindle, 5' Vertical Travel | 17,360 |
| <u>Vertical Boring Mills</u> | |
| Watts Campbell - 16' Vertical | 162,090 |
| Niles Bement - 62" Vertical | 13,880 |
| King Machine Tool - 34" Vertical | 4,060 |
| Pratt & Whitney - 36" x 14" Vertical | 10,120 |
| Bullard Machine - 54" Vertical | 14,470 |
| Colburn Machine - 8' Vertical | 33,570 |
| <u>Drill Presses</u> | |
| American Tool Wks. - 6' Radial | 20,840 |
| Pawling & Harnischfeger - 3 1/2" Spindle, Horizontal and Boring Drill | 28,940 |
| Pond Machine - 6' Radial Drill | 8,110 |
| Pond Machine Tool - 6' Radial Drill | 8,110 |

| MACHINE NAME | PRICE IN YEN |
|--|--------------|
| <u>Drill Presses</u> | |
| Rockford Drilling Machine - 72 x 24", Horizontal drill & boring machine | ¥ 7,520 |
| W. F. & J. Burnes - 20", Rigid | 230 |
| Wm. Gang - 2.1/2", Radial | 120 |
| U. S. Machine - 12", Sensitive | 170 |
| Niles Bement Pond - 24", Vertical | 580 |
| Hamilton Machine - 3', Radial | 6,940 |
| American Tool Company - 7', 19" Column, Radial Drill Press, Sensitive, 12" | 22,860 |
| Cincinnati Bickford - 6' - 19" Column, Radial | 170 |
| | 20,840 |
| <u>Shapers</u> | |
| Stockbridge Machine - 24", Back-geared Crank | 3,240 |
| Hamilton - 16", Back-geared | 1,160 |
| Morton Mfg. Co. - 36" Draw Cut, 54 x 42" Table | 3,470 |
| Cincinnati Shaper - 32", Back-geared | 3,470 |
| Gould & Eberhardt - 24", Back-geared | 2,320 |
| <u>Slotters</u> | |
| Morton Mfg. Co. - 72", Draw Cut | 81,040 |
| W. Bement & Sons - 12", Vertical Slotter | 5,790 |
| W. Bement & Sons - 9", Vertical Slotter | 3,090 |
| Niles B. Pond - 18", Vertical Slotter | 9,840 |
| <u>Keyseater</u> | |
| Mitts & Merrill - 36", #3A | 580 |
| <u>Milling Machines</u> | |
| LeBlond - 11 3/8" x 45" - #2, Horizontal | 1,500 |
| Ingersol - 30" x 12", Horizontal | 11,570 |
| Ingersol - 42" x 32" x 60", Slabbing | 29,520 |
| Ducker-Brainard - 10" x 52" - #3, Slabbing | 2,320 |
| Brown & Sharpe - 11" x 48" - #4, Universal horizontal | 2,460 |
| Cincinnati - 11" x 48" - #4, Universal horizontal | 5,380 |

| MACHINE NAME | PRICE IN YEN |
|---|--------------|
| <u>Grinders</u> | |
| Norton - 12" x 72", Plain Wet | ¥ 5,210 |
| Brown & Sharpe - #2, Universal | 3,760 |
| Woods Engineering - 6" x 32", Universal | 580 |
| G. T. Andes - Twist Drill | 290 |
| Greenfield Machine Co. - 5.1/2" x 28" Table, Universal | 290 |
| General Electric - Double End Tool | 870 |
| Ingersol - Grinder & Cutter | 1,740 |
| Ransom - Table Type | 290 |
| <u>Gear Planers</u> | |
| Woodard - 8' x 12', Helical Gear Planer | 69,460 |
| Woodard - 22' x 23", Helical Gear Planer | 83,360 |
| Woodard - 12', Spur & Helical | 69,460 |
| Woodard - 12" End Milling Hobbing Machine | 92,630 |
| Gould & Eberhardt - 36" Spur Gear Cutter | 2,610 |
| Cincinnati - 72" x 20', Spur Gear Cutter | 6,940 |
| Gleason - 54", Bevel Gear Cutter | 9,980 |
| Gleason - 192", Spur & Bevel Gear Planer | 26,050 |
| Gleason - Automatic Bevel Gear Planer | 3,750 |
| Gleason - 28" Bevel Gear Planer | 7,520 |
| <u>Welding Machine</u> | |
| Lincoln Electric Welder | 170 |
| Torch Burner | 10 |
| <u>Saws</u> | |
| Racine - 6" x 6' | 120 |
| Racine - 8" x 8" | 150 |
| Racine - #6 Hydraulic | 230 |
| Cochrane Bly - #4 Gold Metal | 170 |
| Do-All Contour Saw 30" Throat | 230 |
| Atkine - #7 Hack | 200 |
| <u>Presses</u> | |
| 48" Arbor | 2,890 |
| Canton Hughes - 100 Ton Hydraulic | 11,570 |
| 400 Ton Hydraulic | 46,310 |

| <u>MACHINE NAME</u> | <u>PRICE IN YEN</u> |
|--|---------------------|
| <u>Bolt Cutters</u> | |
| Acme - 3" | ¥ 3,060 |
| <u>Cranes</u> | |
| Toledo - 10 Ton | 17,360 |
| 5 Ton, D. D., Floor Operated | 6,940 |
| 3 Ton | 6,940 |
| 3 Ton, A. C., Floor Operated | 6,940 |
| 3 Ton, Floor Operated | 14,470 |
| 5 Ton, A. C., Floor Operated | 6,940 |
| Nortern Crane - 25 Ton, 5 Ton | 33,580 |
| Yard Crane - 25 Ton & 5 Ton | 31,840 |
| Morgan - 5 Ton, Floor Operated | 12,150 |
| Morgan - 25 Ton & 10 Ton | 63,680 |
| Morgan - 50 Ton & 5 Ton | 72,365 |
| Morgan - 40 Ton & 5 Ton | 72,365 |
| <u>Tools From Other Plants</u> | |
| Niles Bement Pond - Horizontal Boring Mill, 7" Spindle 8' Vertical Travel | 42,830 |
| Niles Bement Pond - Boring Mill, 6.1/2" Spindle x 7' | 32,420 |
| Niles Bement Pond - 6' Radial Drill | 10,420 |
| Landis - 20" x 14 1/4" Cylindrical Grinder | 17,360 |
| Newark - 84" x 24" Spur Gear Cutter #7 | 15,050 |
| Gleason - 54" Bevel Gear Planer | 10,420 |
| Newark - 60" Spur Gear Cutter | 8,110 |
| Gleason - 24" Bevel Gear Planer | 4,920 |
| Air Hammer | 4,000 |
| Air Compressor | 18,000 |
| 500 KW M.G. | 15,000 |
| 60 KW M.G. | 5,200 |
| 50 KW M.G. | 4,800 |
| Structural Steel | 83,000 |
| | ¥ 2,840,000 |

APPENDIX III

Customers Covered under Agency Agreement Between
MITSUI & COMPANY and TOKYO SHIBAURA DENKI-TOSHIBA
of 18 December 1939 (Attachment 2 of Agreement)

Note: (Chi) indicates that Chiyoda may also sell
(Choku) means that TOSHIBA also conducts direct sales
(Gunchoku) means that TOSHIBA sells to Army directly
(Chi and Mitsui together) means the cooperative
arrangement mentioned in Paragraph 5.

Hokkaido Coal Mine Steamship Company
Oriental (Toyo) Rayon Company
Toyo Babcock Company
Toyo Aluminum Company
Japan Steel Works, Ltd.
Muroran Electric Light Company
Kyushu (Coal) Power Generating Company
Tama Ship Yard Company
Taiwan Electro-Chemical Company
Taiwan Sugar Manufacturing
Hokkaido Artificial Petroleum Company
Karafuto Artificial Petroleum Company
Toho Electric Power Company
Ehime Hydro-Electric Power Company
Oigawa Electric Power Company (Chi)
Toho Heavy Industry Company (Chi)
Kyushu Railway Company (Chi)
Chuo Hydraulic Power Company
East Taiwan Electric Power Promotion Company
Japan Iron Manufacturing Company-with respect to
Osaka Iron Works (Chi)
Nittetsu Mining Company
Japan Aluminum Company
Ensuiko Sugar Manufacturing (Ensuiko - harbor in Formosa ?)
Ensuiko Pulp Industry Company
Nisshin Spinning Company
Nisshin Rayon Company
Fujikura Electric Wire Company

Meiji Sugar Manufacturing Company
Japan Metal Industry Company
Yokogawa Bridge Company
Japan-Manchuria Magnesium Company
Japan Nitrogenous Fertilizer Company
Japan Nitrogen Mining Company
Japan Nitrogen Gunpowder Company
Asahi Bemberugu Silk Company
Toyo Industry Company
Toyota-type Weaving Machine Company
Toyota Automatic Weaving Machine Plant Company
Toyota Automobile Industry Company
Toyota Spinning Company (Chi)
Chuo Spinning Company
Shonaigawa Rayon Company (Chi)
Showa Heavy Industry Company (Chi)
Shikoku Chuo Electric Power Company
Sanyo Chuo Hydro-Electric Company
Kyoto Electric Lamp Company (Chi)
Hanshin Express Electric Railway Company
Nankai Railway Company
Osaka Electric Tract Company
Sangu Express Electric Railway Company
Kansai Express Electric Railway Company
Amagasaki Iron Manufacturing Company
Amagasaki Steel Plant Company
Otani Steel Plant
Sumitomo Metal Industry Company
Sumitomo Mining Company
Toyo Steel Plate Company
Toyo Canning Company
Toyo Machinery Company
Tanaka Machinery Company
Yuasa Storage Battery Manufacturing Company
Kurimoto Iron Works Company
Kubota Iron Works Company
Fukoku Tomikuni Artificial Silk Pulp Company
Toyo Silk Fabric Company
Toyo Cotton Company
Dai Nippon Spinning Company
Japan Rayon Company
Kanegafuchi Spinning Company
Toyo Spinning Company

Kurashiki Spinning Company
Kurashiki Silk Fabric Company
Foreign and Domestic Cotton Company
Fukushima Spinning Company
Kishiwada Spinning Company
Tokei Woolen Spinning Company
Temman Textile Company
Nippon Wool Refining Industry Company
Osaka Fu (Municipal Prefecture)
Osaka City Hall
The Electricity Bureau of Osaka City
The Mint
The Electricity Bureau of Kyoto City
The Electricity Bureau of Kobe City
Kawasaki Heavy Industry Company (Chi)
Kyushu Transmission Company
Kyushu Electric Track Company
Kyushu Hydro-Electric Company (Chi)
Izumo Electric Company
Osaka Plate Glass Company (Chi)
Toyo Soda Industry Company
Tokuyama Soda Company (Choku)
Ube Nitrogen Company (Chi)
Ube Soda Industry Company
Ube Cement Company
Ube Oil Liquefaction Industry Company
Ube Iron Works
Onoda Cement Manufacturing Company
The Electricity Bureau of Yamaguchi Prefecture
Kokura Steel Manufacturing Company
Kyushu Special Steel Company
Taiwan Electric Power Company
Taiwan Joint Electric Company
Karen-ko Electric Company (Formosa)
Taiwan Electric Lamp Company
The Railway Department of Taiwan Government
The Communication Department of Taiwan Government
The Bureau of Monopoly of Taiwan Government
Kilung Coal Mine Company
Wing Fung Coal Mine Company
Toho Metal Smelting Company
Shinko Nitrogen Industry Company
Shinko Sugar Manufacturing Company
Dai Nippon Sugar Manufacturing Company (for purchases
in Taiwan)

Hokkai Hydro-Electric Company
Yubari Manufacturing Plant Company
Hokadate Dry Dock Company
Mitsui Gomei Kaisha
Mitsui Mine Co. (Choku)
Toyo High Pressure Industry Company (Choku)
Japan Powder Manufacturing Company
Toyo Precision Machine Company (Gunchoku)
Numatzu Woolen Fabric Company
Showa Airplane Industry Company
Nasu Aluminium Plant Company
Toyo Steel Material Company
Nakajima Airplane Company (Choku, Chi)
Kawazukawa Hydro-Electric Company
West Karafuto Engineering Company
Toa Iron Manufacturing Company
Toyo Electric Chemical Industry Company
North Karafuto Petroleum Company
Japan Paper Manufacturing Company (Choku)
Shibamoto Joint Stock Company (Store)
Niigata Sulphuric Acid Company
Ibigawa Electric Company (Chi)
Daido Steel Manufacturing Company (Choku, Chi)
Joint Woolen Textile Company (Chi)
Showa Woolen Thread Company (Chi)
Toyo Knitting Textile Company (Chi)
Daido Machine Plant Joint Stock Company (Chi)
Hirata Steel Manufacturing Company (Chi)
United Woolen Thread Spinning Company
Toho Gas Company (Chi)
Nagoya City Office (Chi)
The Electricity Bureau of Nagoya City (Chi)
The Railroad Bureau of Nagoya (Chi)
Fujikoshi Steel Material Industry Company (Chi)
The Electricity Bureau of Toyama Prefecture
Kenoshita Iron Works Company
Abe Iron Works Joint Stock Company
Toyo Needle Clothing Manufacturing Company
Spinning Machinery Company
Sakai Iron Works Joint Stock Company (Chi)
Sekisan Plant Joint Stock Company (Chi)
Japan Needle Clothing Company
Kamijima Artificial Fertilizer Company (Chi)
Kamijima Artificial Silk Company

Fukusuke Stocking Company
Menka Spinning Company (Raw cotton?)
Kyoto Municipal Prefecture
Kyoto City Office
Yamato Electric Concern, Ltd,
Osaka Iron Works Joint Stock Company
Japan Iron Sand Industry Company
General Electric Company
Tokunaga Glass Company
Hinode Spinning Company
Kado (also Kabuto) Electric Railroad Company
Hanwa Electric Railroad Company
Ujigawa Electric Company (Mitsui and Chi together)
Hanshin Electric Railroad Company (Mitsui and Chi together)
Sanyo Electric Railroad Company (Chi)
Nakayama Steel Works Joint Stock Company (Chi)
Tomimaga Steel Manufacturing Company
Sumitomo Chemical Industry Company (Chi)
Sumitomo Aluminium Refining Company (Chi)
Dai Nippon Celluloid Company
Kureba Spinning Company
Kawanishi Aircraft Company
Kawanishi Machinery Plant Joint Stock Company (Chi)
Kobe Gas Company
Japan Woolen Textile Company
Oki Fertilizer Plant Joint Stock Company
Hyogo Prefecture Office
Kawazaki Aircraft Machinery Company (Chi)
Kobe Steel Works Joint Stock Company (Chi)
Kaijima Coal Mine Company (Chi)
Kumamoto Electric Company (Chi)
Kumamoto City Electricity Bureau
Imamura Plant Joint Stock Company
Wakamatsu Rolling Stock Company
Wakatsu Iron Works Joint Stock Company
Meiji Mining Company
Miyazaki Prefecture Electricity Bureau
Kinojima Coal Mine Company
Okiyama Coal Mine Company (Chi)
Sanyo Electric Track Company
Japan Tabi (Stockings) Company
Japan Rubber Company (Chi)
Sino-Japan Rubber Company
Bridgestone Tire Company (Chi)

Toyo Metal Company (Chi)
 Meji Railroad Bureau
 Sawara (also Sora) Mine Company (Chi)
 Hiroshima Electric Company (Chi and Mitsui together)
 Sennan Industry Company (Chi)
 Sennan Ship-Building Company
 The Road and Harbor Department of Taiwan Government
 Industrial Research Institute of Taiwan Government
 Forestry Department of Taiwan Government
 Local Harbor Building Offices of Taiwan Government
 Natural Gas Office of the Taiwan Government
 Taiwan Mining Company
 Taihoku City Office
 Teikoku (Imperial) Sugar Manufacturing Company
 Taito Sugar Manufacturing Company
 Taiwan Hemp Manufacturing Company
 Taiwan Iron Works Joint Stock Company
 Kanan Okawa (?) Union *
 Taiwan Civil Engineering Department in Various Localities
 The Electricity Bureau of Sapporo City
 The Railroad Bureau of Sapporo
 The Communication Bureau of Sapporo
 Shizukari Gold Mountain Company, Shizukari Mining Plant
 Teikoku-San (?) Gold Ore Mining Company *
 Sumitomo Mine Plants in Various Localities at Hokkaido
 Asano Cement Company, Hokkaido Factory
 Muroran Dock
 Kushiro City Electricity Office
 Hitomiuta (?) Coal Mine Company *
 Japan Can Company

*(Japanese writing not clear)

APPENDIX IV

Major Stockholders in TOKYO SHIBAURA ELECTRIC COMPANY
(TOKYO SHIBAURA DENKI K.K. - TOSHIBA -) Immediately After
Merger of TOKYO ELECTRIC COMPANY (TOKYO DENKI K. K.) and
SHIBAURA ENGINEERING WORKS, LTD. (SHIBAURA SEISAKUSHO K.K.)

(Translated from the Japanese)

REFERENCE DOCUMENT

The major stockholders' list right after the merger of
 SHIBAURA and TOKYO DENKI

| <u>Stockholders</u> | <u>Shares</u> |
|---|--|
| G. E. Company | 570,574 |
| Mitsui Gomei (Partnership)* | 236,026 |
| Tokyo Shibaura Denki | 143,500 (This amount was cancelled, |
| Daiichi Seimei (The First Life Insurance) | 114,997 |
| Nippon Dengo (Company) | 52,521 (Old Matsuda System) |
| Nagadomi, Yayeko | 32,494 (Old name of Mrs. Yamaguch. |
| Yoshigawa, Genko | 23,056 |
| Mitsui Life Insurance | 22,348 |
| Mitsui Bussan K. K. | 20,000 |
| Teikoku Semei (Imperial Life Insurance) | 10,422 (President, Asabuki, Tsuneyoshi) |
| Gary ** | 19,210 |
| Koshin Sha (Koshin Company) | 18,114 (President, Yawakuchi, Kisaburo) |
| Tairoku Koyodo (No.6 United) | 17,071 (President, Iwadare, Yoshinari) |

* All parentheses and question marks in this Appendix are in the Japanese original.

** Translator uncertain

| <u>Stockholders</u> | <u>Shares</u> |
|---|-------------------------------------|
| Chiyoda Semei (Chiyoda Life Insurance) | 16,707 |
| Fujioka, Keisuke | 13,250 (Former Matsuda Pres. ?) |
| Nagodomi, Suzi | 11,508 (Old name of Mrs. Yamaguchi) |
| Meiji Seimei (Meiji Life Insurance) | 10,000 |
| Grimsey | 9,229 |
| Yasuda Ginko (Yasuda Bank) | 8,565 |
| Grimsey, Mrs. | 7,287 |
| Enomoto, Taisuke | 7,240 |
| Shinsho, Tamau | 6,371 |
| Mrs. Gary | 5,830 |
| Fujioka, Chise | 5,650 (Mrs. Keisuke Fujioka) |
| Settsu, Chockiku (Savings) | 5,566 |
| Mr. Keen | 5,182 |
| Mrs. Keen | 5,182 |
| Kawasaki, Sutezo | 5,035 |
| Ohashi, Shintaro | 4,980 |
| Hisano, Genji | 4,888 |
| Showa Seimei (Showa Life Insurance) | 4,739 |
| Nikka Seimei (Japan-Chine Life Insurance) | 4,630 |
| Nishiwaki Gomei (Nishiwaki United) | 4,375 |
| Furakawa, Toranosuki | 4,150 |
| Daisho Kaigo (Daisho Marine Insurance) | 4,000 |
| Dan, Ino | 4,000 |
| Kimura, Komakichi | 3,997 |
| Sakai, Kikuo | 3,983 |
| Toresiz ** | 3,812 |
| Yamaguchi, Fusa | 3,778 (Mrs. Yamaguchi) |
| Asano, Haru | 3,702 |
| Yamasaki, Hana | 3,695 |
| Oi, Itaro | 3,676 |
| Suzuki, Hikotaro | 3,569 |
| Tachikawa, Hiroshi | 3,521 |
| Kusakawa, Kyuma | 3,404 |
| Katakura, Kentaro | 3,320 |
| Tachikawa, Ryu | 3,300 |
| Sumitomo Seimei (Life Insurance Company) | 3,250 |
| Yamaguchi, Toyoshi | 3,180 |
| Yamaguchi, Yuzuru | 3,161 (The first son of Yamaguchi) |
| Tokyo Chochiku (Tokyo Savings) | 3,039 |
| Taiko Company | 3,037 |
| Nippon Seimei (Japan Life Insurance) | 3,000 |

| <u>Stockholders</u> | <u>Shares</u> |
|---|--|
| Kishi, Otowa | 2,933 |
| Kuchuhachi Ginko (The 98th Bank) | 2,790 |
| Taiichi Sogo Chochi ku (The First Mutual Savings) | 2,755 |
| Kurashige, Tadayoshi | 2,755 |
| Yamada, Sugamichi | 2,739 |
| Takaki, Toshio | 2,730 |
| Otsuka, Eikichi | 2,597 |
| Otsuka, Hajime | 2,490 |
| Yoshimura, Tetsuo | 2,269 |
| Miyage, Junsuke | 2,264 |
| Taini Kyoryo Kai | 2,202 (Representative, Nokuchi, Zentaro) |
| Taini Kinuubu (The second financing section) | 2,177 (Same as preceding) |
| Hoshino Yukinori | 2,176 |
| Inouye, Mitsusata | 2,158 |
| Davis | 2,050 (English) |
| Kokuka, Chohei | 2,000 |
| Takashima, Tsuru | 1,921 |
| Hishigawa, Goshi (Hishigawa Partnership) | 1,884 |
| Masuda, Taro | 1,860 |
| Kondo, Rihei | 1,782 |
| Irie, Eiya | 1,762 |
| Chiyoda Kumi | 1,746 |
| Okumura, Kametaro | 1,722 |
| Maekawa, Zenshiro | 1,718 |
| Fukuzawa, Yasokichi | 1,693 |
| Nippon Shoken (Japan Instrument Company) | 1,660 |
| Ohashi, Shogo | 1,660 |
| Kondo, Toshio | 1,660 |
| Iwatare, Umek | 1,636 |
| Shimizu, Yohichiro | 1,600 |
| Sasata Gomci (Partnership) | 1,593 |
| Watanabe, Minoru | 1,590 |
| Kobayashi, Naka | 1,590 |
| Yoshino, Toichiro | 1,560 |
| Watanabe, Seiichi | 1,534 |
| Fujii, Tatsuya | 1,520 |
| Nishikawa, Takekichiro | 1,510 |
| Hayashi, Shogo | 1,500 |
| Watanabe, Yoshio | 1,476 |

| <u>Stockholders</u> | <u>Shares</u> |
|---|---------------|
| Yoshikawa, Shigekuni | 1,472 |
| Nakamuro, Tatsuzo | 1,453 |
| Inumata, Kiyoshi | 1,448 |
| Sakurada, Sei | 1,423 |
| Ariga, Takeko | 1,400 |
| Fukuda, Ito | 1,484 |
| Sato, Masa | 1,371 |
| Kishi, Iwashi | 1,343 |
| Kattsu, Yoshitaka | 1,337 |
| Frazer and his Family | 1,331 |
| Nippon Chuya Gin (Japan Day & Night Bank) | 1,328 |
| Takimoto Kiheye | 1,311 |
| Kondo, Shinichi | 1,307 |
| Togawa, Fusako | 1,289 |
| Komatsu, Ito | 1,289 |
| Awaya, Kaoruko | 1,289 |
| Shinsho, Shigau | 1,289 |
| Itabayashi, Kaoruko | 1,288 |
| Awaya, Noriko | 1,288 |
| Yamakuchi, Masao | 1,228 |
| Nakajima Kumakichi | 1,216 |
| Sawayama, Ichimatsu | 1,215 |
| Tsumori, Toyoji | 1,195 |
| Nakamura, Kiyoko | 1,176 |
| Warner | 1,172 |
| Micawber | 1,165 |
| Wakimura, Reichiro | 1,162 |
| Tokawa, Chiyoko | 1,159 |
| Matsukawa, Nagao | 1,150 |
| Shindo, Tsune | 1,141 |
| Shiono, Yoshisaburo | 1,137 |
| Shiono, Masaye | 1,130 |
| Hoshino, Suma | 1,119 |
| Ishikubo, Mije | 1,115 |
| Uyed Tomosaburo | 1,095 |
| Enshu Ginko (Enshu Bank) | 1,095 |
| Fujimoto, Billburo | 1,090 |
| Yamada, Kokichi | 1,079 |
| Sawayama, Shokichi | 1,065 |
| Sawayama, Nobuyoshi | 1,065 |
| Ohashi, Shinichi | 1,062 |

| <u>Stockholders</u> | <u>Shares</u> |
|---|---------------|
| Sawayama, Kuniiji | 1,062 |
| Fukuta, Kayo | 1,022 |
| Yamamoto, Hiromichi | 1,019 |
| Sekawa, Shosei | 1,009 |
| Fujise, Shimichiro | 1,005 |
| Takahashi, Kataro | 1,002 |
| Isono Koshi (Isono Partnership) | 1,000 |
| Tasaka, Fuku | 1,000 |
| Fukui Kikusaburo | 1,000 |
| Teikoku Kasai (Imperial Fire Insurance) | 1,000 |
| Aichi Ginko (Aichi Bank) | 1,000 |

[TOTAL: 1,648,273]

The rest of the stockholders are omitted.

| | |
|----------------------------------|-----------------------|
| Old Stockholders 3,390 - holding | 1,883,500 shares |
| Old Shares of Tokyo | |
| Shibaura Denki cancelled | <u>143,500 shares</u> |
| Present Stockholders, 3,389 - " | 1,740,000 shares |