HEADQUARTERS
U S. STRATEGIC BOMBING SURVEY
(PACIFIC)
C/O POSTMASTER, SAN FRANCISCO

ANNEX B

INTERROGATION NO. 10 (Obtain from G-2)

PLACE TOKYO
DATE 5 Oct. TIME

Division Of Origin ~~Headquarters~~ Chairman's Office

SUBJECT: (1) General
(2) Coke, Iron & Steel, and Misc.
(3) Transportation
(4) Operational and Damage.

Personnal interrogated and background of each: Admiral TOYODA

— To 1938 - Comdr. Sasebo Naval Dist
1939 - 40 - C.O. air Hq., Naval Ministry
9/1940 - 4/1941 - Vice Naby Minister
7/1941 - 10/1941 - Minister of Foreign affairs during negotiations with U.S.
10/1941 - Chairman - Japan Steel Co
4/1945 - Minister of Munitions.

Where interviewed (office) Conference Room, 7th Flr. Meiji Bldg.

Interrogator: Mr. Nitze, Admiral Ofstie, General Gardner

Interpreter: LT. LANSNER

Allied Officers Present:
LT COMDR. WALTER WILDS

Summary:

Ready for sign off

P.V.T
SUMMARY
ON SEPARATE
PAGES.

Summary —

(1) General -

Various unconsequential communiques regulated allocation of essential materials prior to 1937, at which time a board was established with members of cabinet rank. A Planning Board to step up production was set up in 1939 with great scope but little actual authority. With the establishment of a Ministry of Munitions, November 1943, the functions of the Planning Board were absorbed by the Total Mobilization Bureau, under the Ministry. At all times, however, the Army and Navy were in full control. The Ministry of munitions allocated raw materials only ~~and procure~~ by the Army and Navy usually ~~resulted in~~

The Cabinet was well informed as to the progress of the war during the last 2 years but could exercise no control over military operations. ~~Admiral Togo's regards Okinawa as the last point of defense. The shipping situation became critical last fall. Opinion among the Cabinet is said to be divided as to whether a blockade would have been established without said by B-29's.~~

(2) Coke Iron & Steel & Misc.

At the beginning of the war steel output of the Empire was 4 to 5 million Tons. It remained at this level until mid-1944. By April 1945 production had dropped to 1,000,000 Tons which was divided between the Army and Navy. ~~The electric furnace steel dropped from 400000 Tons, annually, to 160,000 tons in 1945.~~ The major cause was difficulties of transportation and ~~decreased~~ bomb damage to coking facilities. Of the total output 400,000 Tons annually was electric furnace steel. This dropped 60% due mainly to lack of transport facilities. The Army & Navy have their own factories to produce high grade steel and they exercise control over privately owned plants. The production of nitrogen and ammonia, nominally under the Ministry of Munitions was controlled by the military which reduced the normal allotment of 56% to agriculture, when the shortage became critical. The ~~supply~~ production of aluminum was very short at the ~~end~~ war's end due, again, mainly to difficulties of transportation.

~~Admiral Toyoda believes that the Cabinet was well informed as to the progress of the war in the last two years but could exercise no control over military operations.~~

(over)

the Admiralty regards Germany as being the
last point of defense. ~~Evidently~~ the shipping situation
became critical last fall. Opinion was divided
as to whether a blockade would have been fatal
without B-29 raids.

(3) Transportation.

The submarine warfare affected everything in the Japanese economy but at no one time did it have an immediate effect on policy. Decrease in shipping resulted in critical shortages of imports from N. China. Original plans called for all steel and coal from Kyushu to be shipped through the Inland Sea to Osaka. Air and submarine attacks made it impossible. Rail facilities from Osaka to SHIMONOSEKI are inadequate and rendered impracticable by air attacks. Destruction of the Aomori-Hakodate rail ferry system was compensated to only a slight degree by the substitution of other ships. Near the end of the war ~~[illegible]~~ transport facilities were barely sufficient to carry adequate food and coal to sustain the people.

~~Japan's transportation system is vulnerable and without protection other than fighter planes, which were held in reserve for defense against invasion, rather than used.~~

Fighter planes afford the only possible protection to Japan's vulnerable transport system. They were believed more important as a defense against invasion.

The shipping situation became critical last fall.

Opinion was divided as to whether a blockade would have been fatal without B-29 raids.

(d) Operations and Damage.

When Admiral Toyoda became Minister of Munitions the greatest problem was air raids, which in combination with aerial mining and submarine warfare disrupted transportation and upset production. Although attrition by submarines affected the entire economy and was a great factor in stopping production, the B-29 fire raids had the immediate effect of upsetting the stability of the populace and a greater effect on production. The destruction of the two Mitsubishi plants in Nagoya by precision bombing was an important loss.

Bombing of small cities upset the dexterity of dispersing of small plants and with the attacks on transportation, dealt the fatal blow to production. Plans to consolidate small scattered plants, in an effort to increase production were thwarted by the swift progress of the war.

OCT 7.

Smooth draft of the minutes taken at the interview with Adm. TOYODA on Friday Sept 5. The late arrival of the stenographer, the general cross questioning and the confusion of the discussion between the interrogators resulted in a transcript which may have contained most of the salient points, but lacked coherence and continuity. This attempts to fill out the gaps and render the discussion into a cursive, intellible affair

Saumer

Title page

Distr

Interrogation No. 10 - 50 Copies

Subject: 1) General
2) Coke, Iron and Steel
3) Road and Rail Transportation
4) Shipping
5) Operation of Damage

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(The first interview with Admiral TOYODA, Teijiro was held in the Conference Room on the 7th Floor of the Meiji Bldg. on 5 October 1945. Attending were Mr. Nitze, Admiral Ofstie, General Gardiner, Lt-Cmdr Wilds and representatives of various divisions. Lt. Lansner ~~acted as~~ interpreted).

INTERROGATION

The conference ~~was~~ began with a general statement of the purpose and interests of the U.S.S.BS. Admiral TOYODA was then asked to outline his career during the last ten years.

19-- -1938 Commander of the SASEBO Naval District

1939 -1940 In charge of Air HQ of the Naval Minstry

1940 Sept -1941 April Vice Navy Minister

1941 July -1941 October Minister of Foreign Affairs during the the period of extensive negotions with the United States.

1941 October Admiral TOYODA left the Cabinet and became Chairman of the Japan Steel Co. During this time he also served as a member of the Planning Board (KIKAKUIN) and the Iron and Steel Control Association.

(SWW) 1945 April Reentered the Cabinet with the portfolio of Minister of Munitions. He held this post until 17 August, 1945.

.minutes)

Q. Will Admiral TOYODA give us some idea of the steps taken and the agencies established to deal with the problems ~~of investigation~~ of production, allocation of materials and general planning?

A. Since I was primarily concerned with Naval Matters until 1941 I do not have an intimate acquaintance with the various boards before that time. However ... before 1939 there were various control commissions for the regulation of highly essential materials. These were of no great consequence in the general economy. In 1937 an investigation board was established with members of Cabinet rank to look into the requirements of various industries and thes, of the military establishment. In 1939 when the tempo of investigation and planning was stepped up a Planning Board was established to replace the investigation board. The function of this organization was similar to that of its predecessor, but increased emphasis was placed on necessary steps leading to a swift increase in production. Actually the Planning Board had little authority. This still rested with the Cabinet, When the Munitions Ministry was established in November 1943 the Planning Board wasincorporated into the Ministry and its functions were continued by the Total Mobilization Bureau. The scope of the Planning Board and the Total Mobilization Bureau was very great including manpower, shipping, materials, etc.

Q. Could you give us some of the names of the leading figures of the ~~K~~ Planning Board and the Total Mobilization Bureau?

A. I should think that you would be interested in the Messrs. AOKI, Kazuo, HOSHINO, Naoki, SUZUKI, TEichi, TAKEUCHI, Kakichi, TAKI, Masao and TAKAMINE, Meitatsu. However within the Munitions Ministry itself you could find valuable information from the heads of the various bureaus. They are much more familiar with the

details than I am.

Q. Since the Admiral had naval duties until 1941 perhaps he could give us some ideas of the basic problems facing Japan in 1941 with respect to raw materials, labor, etc.

A. My primary concern at that time and for some years afterwards was with iron and steel. I could best use those materials as an example.

Q. Well then, in a consideration of iron and steel what were the limiting factors and what was done to increase output ?

A. At the moment I am not too well equipped with statistics and details, however I shall obtain them for you as soon as possible. However, generally speaking the steel output of Japan (and Manchuria) was about 4 or 5 million tons at the beginning of the war. Of course the demands of the army and navy were infinite but we considered that amount to be a satisfactory production. Steel production remained at this level until mid-1944 when it began to drop off. We were never able to increase production after that. I shall be glad to explain more fully with graphs and figures when I obtain them.. Labor supply was adequate although there was some difficulty in allocating it correctly.

Q. How were the competing demands of the Army, Navy and industry met ?

A. That was a function of the Planning Board and the Total Mobilization Bureau of which I spoke a few minutes ago.

Q. Is it yet possible to establish contact with the Total Mobilization Bureau and are the records still available?

A. The men I mentioned a moment ago would be the best contact with the old Total Mobilization Bureau. The records are probably at the

Ministry of Commerce and Industry. The Planning Board was a part of this ministry and the records of the Munitions Ministry were incorporated into those of the present Ministry of Commerce and Industry. Of course some were lost in the incendiary attacks.

Q. Would the original Planning ~~Group~~ Board and subsequently the Total Mobilization Bureau concern themselves with all planning?

A. Everything.

Q. Shipping ?

A. No, not shipping.

Q. So that it would be Admiral X TOYODA's opinion that it would be possible to find out the widest range of information from these ~~x~~ groups.

A. Yes ... these men have a general outlook on the whole business.

Q. Could you give us some idea of the authority vested in the Planning Board and the Total Mobilization Bureau?

A. The question of authority is a difficult one. I should say that ~~that~~ the ~~x~~ authority was of an advisory nature. The basic step in planning was the assembling of data. After this had been accomplished members of the Army and Navy were called in for consultation and the necessary requirements were discussed. Civilian groups played little part in the business. Actually no decisions were made by one person or one group. It was assumed that certain basic decisions would be made by consultation but in the last analysis these had to be approved by Army and Navy officers. I might add that the Minister of Munitions had a strong voice in the matter, but even he could not decide anything by himself.

Q. Did any other agencies besides the Army and the Navy sit in on

these conferences?

A. Yes ... I neglected to mention members of the Transportation Bureau. All in all, the Total Mobilization Bureau might be considered an Economic General HQ.

Q. Do the Army and Navy have comparable planning and allocation bureaus?

A. Yes ... in the Army the Military Preparation Bureau (SEIBIKYOKU) and in the Navy the Military Supplies Preparation Bureau (HEIBIKYOKU) have similar functions.

Check in English for these

Q. Are they also purchasing and contracting agencies?

A. The Intendance Bureau and the Bureau of Supply and Accounts did the actual contracting and purchasing, working closely with the planning sections I mentioned before.

Q. Could the Admiral explain some of his problems when he took over the Ministry of Munitions this year?

A. Obviously the greatest problem was air raids. Daily raids disrupted transportation, upset all production plans, affected everything. All at once we suffered air raids, submarine warfare and aerial mining. The first carrier attacks were not particularly troublesome. Our greatest problems date from the great incendiary raids on TŌKYŌ and ŌSAKA in the early part of March.

Q. In Admiral TOYODA'S opinion did the real bottleneck in the shortage of materials and the decrease of production stem from the loss of shipping or the B-29 raids?

A. I think that the air raids were much more effective than the gradual war of attrition by the submarines. The terror of these raids undermained the mentality of the people, reduced their working effectiveness and moreover the destruction of a great mass of

small industry disrupted the whole economy.

Q. And submarine warfare ...?

A. Of course submarine warfare affected everything in the Japanese economy but at no one time did it have an immediate effect on policy. It was a great factor in stopping production and as such weighed heavily in the overall planning. But the stability of the populace was directly upset by the fire raids.

Q. What was the impact of precision raids on factories and oil plants?

A. Precison bombing first destroyed our air engine plants. (Interpreter remarked that this was our plan.) The destruction of the two Mitsubishi plants in Nagoya was remarkably complete and the loss of those plants was very important to us. You know that the growth of the Japanese aircraft industry has been remarkably rapid and as a result ~~she~~ it relies heavily on small and home industry. Besides the precision attacks, your destruction of the little plants in the smaller cities hit by bombing reduced our productive power greatly.

Q. What steps did you take to overcome the destruction of the little plants and industries?

A. The small plants were scattered all over the country in an attempt to avoid destruction. However when you attacked our transportation facilities and bombed the small cities in which so much of our industry had been established our production was dealt a fatal blow.

Q. Did you make any attempt to centralize in large plants the smaller component plants which might have been outside the cities?

A. We gave serious consideration to this plan but the progress of the war was so quick that we were forced to maintain our production

and supply to the army and the navy at the same time that a movement or consolidation of our industry was necessary. In rapid succession we had Saipan and then Iwo and the B-29 attacks. We had no time to replan our industry. At that time I was not in a ministerial position so we must consider these to be my own thoughts on the matter. I became Minister in the last days of the OKINAWA campaign when we were making desperate efforts to keep moving.

Q. As a result of various campaigns was there a change in the priority methods, responsibility for the production of small arms or tanks, etc.

A. Small arms and ammunition was always a direct responsibility of the Army and the Navy. The only responsibility of the Munitions Ministyr was raw materials and the only ordnance exception airplanes.

Q. What about the high grade iron and steel necessary for the manufacture of guns?

A. The allocation of high grade steel is a responsibility of the Army and the Navy. They both have special factories of their own for the production of such steel and they can do with it as they wish.

You know, after the last war I was Naval Attache in England for almost four years. At that time I made a special study of the munitions industry in England and spoke on occasion to Lloyd George and other prominent officials connected with munition manufacture and control. Lloyd George pointed out that even then the Munitions Ministry did not have enough power.

Q. Who had control over ~~tanks and heavy ammunition~~ these materials? (Since private industry manufactured the greater part of ~~the material~~ tanks or heavy guns, didn't they ~~see~~ fall under the Munitions Ministry?

A. I should like to ~~impress~~ stress the point that the Army had full control, although they conferred with the Planning Board. They had ~~the~~ direct authority over the manufacturers of this ordnance. The Munitions Ministry decided to allocate certain amounts of raw steel to the Army and Navy and from that time on it was their responsibility. In many cases the processing of high grade steel for military use has always been done in plants which are owned by the Army and Navy. Really this control business is very complicated to have to get into.

Q. In what way does the Army control a private company like HITACHI?

A. One way, ~~it~~ is by the method of resident inspectors and inspecting grades.

Q. When you became Minister of Munitions what main problems were faced? In other words - what was first priority - ships, aircraft, munitions, etc.?

A. My concern was not particularly with these items. We didn't know whether they wanted tanks or guns, we only knew that they wanted materials. For example, when I took over the quarterly steel production was about 250,000 tons. I had control in the sense that the Army and Navy just couldn't get anymore from me.

Q. What was the usual proportion of steel allowed to the Army, Navy and Civilians?

A. The total amount was split roughly in half and almost nothing was left for the civilians.

Q. Do you mean that no steel was left for railroads, no steel was available to repair damaged cities.

A. That isn't quite right, but the Army and Navy had a crying need for steel and they were given top priority.

Q. In the good years before the shortage set in, what was the usual allocation of steel?

A. At that time some was definitely allocated to the civilians.

Q. What is the major cause in the drop of steel production from one million to two-hundred and fifty-thousand tons?

A. The most damaging cause was the decrease in the importation of coke and coal from North China. The critical decrease in shipping and the decrease of coking facilities due to air raids was very serious. Towards the end of the war, we tried to use rail transportation as much as possible, however even this became unsatisfactory with the increasing of low attacks.

Q. Of the 250,000 tons of steel remaining, what percentage was electric furnace steel which would not require much coke?

A. The quarterly production of electric furnace steel was about 100,000 tons (this year.)

Q. Did that go down too?

A. It dropped to less than 40,000 tons in June and July, 1945. C

Q. Why the decrease in electric furnace steel?

A. Difficulty in transportation. C

Q. To what extent did ~~they~~ you attempt to use native Japanese coal to continue ~~their~~ your steel production?

A. The Japanese coal is light coal and isn't suitable for use with iron and steel. The domestic HOKKAIDO and KYUSHU coal has little strength and needs a mixture of coal from North China to be used in a blast furnace. C

Q. Was much damage caused by air raids to your coke ovens?

A. Our coke ovens in ~~YA~~WATE ANshan and other places were severely damaged by B29 raids. C

Q. Could you elaborate on the difficulties of transportation that you experienced?

A. I'll point to the map to make myself clearer. The route which runs from TOKYO to KOBE is Japan's most important railroad. Here ~~coverage~~ curvature is slight, grades are gradual and the weight of the rails ~~are~~ is heavier ~~down here~~. We have a railroad system covering SOUTHERN HONSHU running from OSAKA to SHIMONOSEKI. This stretch is largely owned by private companies. There are steep grades and wide turns and the rails are extremely light. As we originally planned, all steel and coal from KYUSHU would come by ship through the Inland Sea up to Osaka; however with the increased weight of air attacks and submarine attacks on our shipping we found it impossible to carry out this plan. C R

We were forced to transfer a great deal of the tons to this inferior railroad system in South Honshu. Even under the best conditions this would have been unsatisfactory, however your air attacks made the situation almost fatal. ~~Domestics~~ Track were destroyed, water facilities were ruined and more over the fire bombing of cities along the way, such as Fukuyama, Takoyama, Shimonoseki, and Hiroshima made the situation impossible. Transportation facilities were reduced 75% along this line.

Q. What was the effect of our destruction of the Aomori - Hakodatte rail ferry system?

A. Originally we had about eight ferries which plied between Aomori and Hakodatte. I think there is only one left. These ferries could transport about 300,000 tons of commodities, half of which was coal and other half food stuff. After the attack, this capacity was cut to almost zero.

Q. Were you able to substitute any other ships which could carry the tonnage?

A. I think that four ships which used to be on the Korea to Japan run ~~were~~ Were transferred to the ~~ISUGAM~~ TSUGARU Straits. I don't know their capacity.

Q. What steps were taken to protect the transportation system from air attacks?

A. As I have explained ~~that~~ Japan's transportation system is extremely vulnerable, with the exception of fighter interception to combat the B29 attacks ~~and~~ there was little protection we could afford the railroads.

Q. In spite of B29 attacks on various of their crucial industries, we have noticed that ~~fire objectives were splendid~~ fighter protection was comparatively slight. - Did the Admiral request ~~or~~ the Japanese Air Force to protect these vital plants?

A. Of course, it was my duty to ask the war Ministry to protect them. I pressed it often.

Q. What was their reply?

A. They considered it very carefully. They understood the problem well enough and tried to do what they could.

Comment

As we understand it, they felt it more important to save planes for defense against invasion than to protect industries or transportation.

Q. What about the responsibility of aviation gasoline?

A. Since almost all the aviation gasoline was used by the Army and Navy it was directly controlled by them. The responsibility of the Munitions Ministry was the establishment of areas which could ~~have~~ be exploited for full ~~protection~~ production.

Q. Was the ~~protection~~ production of nitrogen and ammonia under the Munitions Ministry or the Army and Navy.

A. Although the production of ammonia and nitrogen was directly in the hands of the Ministry of Munitions, the Army and Navy was also anxious to see that its ~~protection~~ production was kept up. They actually controlled that industry.

Our biggest problem was the allocation of materials to the Army and Navy.

Q. Since nitrogen plays an important part in agriculture, what percentage was allocated to this endeavor?

A. The percentage was 56% for agriculture and 44% for the military establishment, however, during the last stages of the war, since there was such a critical shortage of ammonia, the Ministry of Munitions encroached upon the field of agriculture.

Q. Where did the responsibility of aircraft production lie? We understand that the Munitions Ministry had responsibility of this production ~~and~~ did that mean that it also controlled aluminum?

A. Responsibility for aluminum lies in the Light ~~Material~~ Metals Bureau of the Munitions Ministry.

Q. Was the supply of aluminum adequate for the aircraft program in the last stages of the war?

A. Aluminum production was quite short at the end of the war.

Q. Was this due to the shortage of bauxite?

A. It was mainley due to ~~the~~ transportation difficulties at the end of the war. Transportation of vital war material was cut because of the necessity for transporting food and salt since these two items were most vital for human existance.

Q. Wonder What percentage of salt was required for food and what percentage for chemical reasons?

A. For food and human comsumption about 700,000 tons were necessary. Only 350,000 of this could be produced in Japan. We had to import the rest.

Q. What How was produced by domestic salt?

A. In general evaportation of sea water by electricity.

Q. When did the food problem in Japan really become serious?

A. In October of 1944, it became critical.

Q. What percentage of Japan's food supply was domestic?

A. I think you have a general report to the members of parliment which contains this information.

Q. You have been in both big business and in the Cabinet, how well were you informed of the progress of the war?

A. I understood by my instincts.

Q. In general was the Cabinet well informed?

A. The Cabinet was well informed during the last two years. They met every Saturday and Sunday and had the situation explained to them by Army and Navy Officers.

Q. Did the Cabinet exercise any control of military and naval operations?

A. Practically none.

Q. And they probably didn't have any control in the selection of military leaders?

A. That is true.

Q. When you returned to the Cabinet this year was there any free discussion about the termination of the war?

A. No, it wasn't a matter for the Cabinet to decide.

Q. Was there any widespread ~~of the~~ realization of the hopelessness of the Japanese situation at that time from the general economic and military point of view?

A. No, but my instinct told me.

Q. What do you mean by instinct?

A. I felt that the productive power was decreasing day after day, of course that is facts.

Q. At what time did you feel that there was no prospect of going forward?

A. My feeling was that it began when the Marianas were seized and the B29's made their first approach. We thought that it would take 3 or 4 months to make the Marianas available for B29 operations, but you work much more quickly than we ~~Japs~~ do.

Q. Was there any feeling that Germany might come out with some new weapon which would change the course of the war?

A. I Had seen in the newspapers various reports of the possibility of a new weapon, but that was just rumors.

Q. ~~In subsequent time~~, were the Marianas considered the last point of defense?

A. I don't think so, I think we might consider Okinawa. Anyone who had studied your tactics in Europe prior to your landing in France would have realized what steps you would undertake to render Japan's help less - particularly attacks on transportation and distribution facilities.

Q. Was there any one time when you felt shipping losses had become so severe that you couldn't possibly hope to correct them?

A. ~~In practical~~ Actually our shipping situation has been difficult for a long time.

Q. Well, how far back was the shipping really bad and decisive?

A. About last fall.

Q. Do you think a blockade without an invasion and without B29 raids would have been decisive?

A. That is a question we must study very carefully. Some people said that the blockade alone would have been fatal and other said not.

Subsequently an appointment was made with Admiral Toydoa for a more detailed discussion of steel, fuel and chemical problems. This is to be held in the Office of the Vice Ministry of Commerce and Industries. On Tuesday 9 October 1945, Admiral Toydoa will have prepared a detailed strategic report on production of loss during the war.

4.1.1

HEADQUARTERS
(PACIFIC)
U. S. STRATEGIC BOMBING SURVEY

INTERROGATION NO. 10

Place: Tokyo
Date: 5 October 1945

Division of Origin: Chairman's Office

Subject:
(1) General.
(2) Coke, Iron & Steel and Misc.
(3) Transportation.
(4) Operational Damage.

Personnel interrogated and background of each:

Admiral TOYODA, Teijiro (IJN)
... to 1938 - Comdr. Sasebo Naval District
1939 to 1940 - C.O. Air Hq. Naval Ministry
September 1940 to April 1941 - Vice Navy Minister
July 1941 to October 1941 - Minister of Foreign Affairs during Negotiations with U.S.
October 1941 - Chairman, Japan Steel Co.
March 1945 - Minister of Munitions.

Interrogators: Mr. Nitze, Admiral Ofstie, General Gardner

Interpreter: Lt. (jg) Lansner, USNR.

Allied Officers Present: Lt. Comdr. Walter Wilds, USNR.

SUMMARY

(1) General: Various inconsequential commissions regulated allocation of essential materials prior to 1937, at which time a board was established with members of Cabinet rank. A Planning Board to step up production was set up in 1939 with great scope but little actual authority. With the establishment of a Ministry of Munitions, November 1943, the functions of the Planning Board were absorbed by the Total Mobilization Bureau, under the Ministry. At all times, however, the Army and Navy were in full control. The Ministry of Munitions allocated raw materials only.

The Cabinet was well informed as to the progress of the war during the last two years but could exercise no control over Military operations.

(2) Coke, Iron & Steel & Misc: At the beginning of the war steel output of the Empire was 4 to 5 million tons. It remained at this level until mid 1944. By April 1 45 production had dropped to 1 million tons which was divided between the Army and Navy. The major causes were difficulties of transportation and bomb damage to cokin industries. Of the total output 400,000 tons annually was electric furnace steel. This dropped 60% due mainly to lack of transportation. The Army and Navy have their own factories to produce high grade steel and they exercise control over privately owned plants. The production of nitrogen and ammonia, nominally under the Ministry of Munitions, was controlled by the Military which reduced the normal allotment of 56% to agriculture, when the shortage became critical. The production of aluminum was very short at the war's end due, again, mainly to difficulties of transportation.

(3) Transportation: The submarine warfare affected everything in the Japanese economy but at no one time did it have an immediate effect on policy. Decrease in shipping resulted in critical shortages of imports from N. China. Original plans called for all steel and coal from Kyushu to be shipped through the Inland Sea to Osaka. Air and submarine attacks made it impossible. Rail facilities from Osaka to Shimonoseki are inadequate and rendered impracticable by air attacks. Destruction of the Aomori-Hakodate rail ferry system was compensated to only a slight degree by the substitution of other ships. Near the end of the war transport facilities were barely sufficient to carry adequate food and salt to sustain the people,

Fighter planes offered the only possible protection to Japan's vulnerable transport system. These were believed more important as a defense against invasion.

The shipping situation became critical last Fall.

(4) Operations and Damage: When Admiral TOYODA became Minister of Munitions the greatest problem was air raids, which in combination with aerial mining and submarine warfare disrupted transportation and upset production. Although attrition by submarines affected the entire economy and was a great factor in stopping production, the B-29 fire raids had the immediate effect of upsetting the stability of the populace and a greater effect on production. The destruction of the two Mitsubishi plants in Nagoya by precision bombong was an important loss.

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INTERROGATION

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Q: Could you give us some of the names of the leading figures of the Planning Board and the Total Mobilization Bureau?

A: I should think that you would be interested in the Messrs. AOKI, Kazuo, HOSHINO, Naoki, SUZUKI, Toichi, TAKEUCHI, Kakichi, TAKI, Masao and TAKAMINE, Meitatsu. However, within the Munitions Ministry itself you could find valuable information from the heads of the various bureaus. They are much more familiar with the details than I am.

Q: Since the Admiral had naval duties until 1941 perhaps he could give us some ideas of the basic problems facing Japan in 1941 with respect to raw materials, labor, etc.

A: My primary concern at that time and for some years afterwards was with iron and steel. I could best use these materials as an example.

Q: Well then, in a consideration of iron and steel what were the limiting factors and what was done to increase output?

A: At the moment I am not too well equipped with statistics and details, however, I shall obtain them for you as soon as possible. Generally speaking, the steel output of Japan (and Manchuria)was about 4 or 5 million tons at the beginning of the war. Of course the demands of the Army and Navy were infinite but we considered that amount to be a satisfactory production. Steel production remained at this level until mid-1944 when it began to drop off. We were never able to increase production after that. I shall be glad to explain more fully with graphs and figures when I obtain them. Labor supply was adequate although there was some difficulty in allocating it correctly.

Q: How were the competing demands of the Army, Navy and Industry Met?

A: That was a function of the Planning Board and the Total Mobilization Bureau of which I spoke a few minutes ago.

Q: Is it yet possible to establish contact with the Total Mobilization Bureau and are the records still available?

A: The men I mentioned a moment ago would be the best contact with, the old Total Mobilization Bureau. The records are probably at the Ministry of Commerce and Industry. The Planning Board was a part of this ministry

and the records of the Munitions Ministry were incorporated into those of the present Ministry of Commerce and Industry. Of course some were lost in the incendiary attacks.

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A: Everything.

Q: Shipping?

A: No, not shipping.

Q: So that it would be Admiral TOYODA's opinion that it would be possible to find out the widest range of information from these groups.

A: Yes ... these men have a general outlook on the whole business.

Q: Could you give us some idea of the authority vested in the Planning Board and the Total Mobilization Bureau?

A: The question of authority is a difficult one. I should say that the authority was of an advisory nature. The basic step in planning was the assembling of data. After this had been accomplished members of the Army and Navy were called in for consultation and the necessary requirements were discussed. Civilian groups played little part in the business. Actually no decisions were made by one person or one group. It was assumed that certain basic decisions would be made by consultation but in the last analysis these had to be approved by Army and Navy officers. I might add that the Minister of Munitions had a strong voice in the matter, but even he could not decide anything by himself.

Q: Did any other agencies besides the Army and the Navy sit in on these conferences?

A: Yes ... I neglected to mention members of the Transportation Bureau. All in all, the Total Mobilization Bureau might be considered an Economic General HQ.

Q: Do the Army and Navy have comparable planning and allocation bureaus?

A: Yes ... in the Army the Military Preparation Bureau (SEIBIKYOKU) and in the Navy the Military Supplies Preparation Bureau (HEIBIKYOKU) have similar functions.

Q: Are they also purchasing and contracting agencies?

A: The Intendance Bureau and the Bureau of Supply and Accounts did the actual contracting and purchasing, working closely with the planning sections I mentioned before.

Q: Could the Admiral explain some of his problems when he took over the Ministry of Munitions this year?

A: Obviously the greatest problem was air raids. Daily raids disrupted transportation, upset all production plans, affected everything. All at once we suffered air raids, submarine warfare and aerial mining. The first carrier attacks were not particularly troublesome. Our greatest problems date from the great incendiary raids on TOKYO and OSAKA in the early part of March.

Q: In Admiral TOYODA's opinion did the real bottleneck in the shortage of materials and the decrease of production stem from the loss of shipping or the B-29 raids?

A: I think that the air raids were much more effective than the gradual war of attrition by the submarines. The terror of these raids undermined

the mentality of the people, reduced their working effectiveness and moreover the destruction of a great mass of small industry disrupted the whole economy.

Q: And submarine warfare ...?

A: Of course submarine warfare affected everything in the Japanese economy, but at no one time did it have an immediate effect on policy. It was a great factor in stopping production and as such weighed heavily in the overall planning. But the stability of the populace was directly upset by the fire raids.

Q: What was the impact of precision raids on factories and oil plants?

A: Precision bombing first destroyed our air engine plants. (Interpreter remarked that this was our plan). The destruction of the two Mitsubishi plants in Nagoya was remarkably complete and the loss of those plants was very important to us. You know that the growth of the Japanese aircraft industry has been remarkably rapid and as a result relies heavily on small and home industries. Besides the precision attacks, your destruction of the little plants in the smaller cities hit by bombing reduced our productive power greatly.

Q: What steps did you take to overcome the destruction of the little plants and industries?

A: The small plants were scattered all over the country in an attempt to avoid destruction. However, when you attacked our transportation facilities and bombed the small cities in which so much of our industry had been established our production was dealt a fatal blow.

Q: Did you make any attempt to centralize in large plants the smaller component plants which might have been outside the cities?

A: We gave serious consideration to this plan, but the progress of the war was so quick that we were forced to maintain our production and supply to the army and the navy at the same time that a movement or consolidation of our industry was necessary. In rapid succession we had Saipan and then Iwo and the B-29 attacks. We had no time to replan our industry. At that time I was not in a ministerial position so we must consider those to be my own thoughts on the matter. I became Minister in the last days of the OKINAWA campaign when we were making desperate efforts to keep moving.

Q: As a result of various campaigns was there not a change in the priority methods, responsibility for the production of small arms or tanks, etc.?

A: Small arms and ammunition was always a direct responsibility of the Army and the Navy. The only responsibility of the Munitions Ministry was raw materials and the one ordnance exception - airplanes.

Q: What about the high grade iron and steel necessary for the manufacture of guns?

A: The allocation of high grade steel is a responsibility of the Army and the Navy. They both have special factories of their own for the production of such steel and they can do with it as they wish.

You know, after the last war I was Naval Attache in England for almost four years. At that time I made a special study of the munitions industry in England and spoke on occasion to Lloyd George and other prominent officials connected with munition manufacture and control. Lloyd George pointed out that even then the Munitions Ministry did not have enough power.

Q: Since private industry manufactured the greater part of tanks and heavy guns, who had control over these materials? Didn't they fall under the Munitions Ministry?

A: I should like to stress the point that the Army had full control, although they conferred with the Planning Board. They had direct authority over the manufacturers of this ordnance. The Munitions Ministry decided to allocate certain amounts of raw steel to the Army and Navy and from that time on it was their responsibility. In many cases the processing of high grade steel for military use has always been done in plants which are owned by the Army and Navy. Really this control business is very complicated to have to get into.

Q: In what way does the Army control a private company like HITACHI?

A: One way is by the method of resident inspectors and inspecting grades.

Q: When you became Minister of Munitions what main problems were faced? In other words - what was first priority - ships, aircraft, munitions, etc.?

A: My concern was not particularly with these items. We didn't know whether they wanted tanks or guns, we only know that they wanted materials. For example, when I took over the quarterly steel production was about 250,000 tons. I had control in the sense that the Army and Navy just couldn't get any more from me.

Q: What was the usual proportion of steel allowed to the Army, navy and civilians?

A: The total amount was split roughly in half and almost nothing was left for the civilians.

Q: Do you mean that no steel was left for railroads, no steel was available to repair damaged cities?

A: That isn't quite right, but the Army and Navy had a crying need for steel and they were given top priority.

Q: In the good years before the shortage set in, what was the usual allocation of steel?

A: At that time some was definitely allocated to the civilians.

Q: What is the major cause in the drop of steel production from one million to two-hundred and fifty-thousand tons?

A: The most damaging cause was the decrease in the importation of coke and coal from North China. The critical decrease in shipping and the decrease of coking facilities due to air raids were very serious. Towards the end of the war, we tried to use rail transportation as much as possible, however, even this became unsatisfactory with the increase of low attacks.

Q: Of the 250,000 tons of steel remaining, what percentage was electric furnace steel which would not require much coke?

A: The quarterly production of electric furnace steel was about 100,000 tons (this year).

Q: Did that go down too?

A: It dropped to less than 40,000 tons in June and July, 1945.

Q: Why the decrease in electric furnace steel?

A: Difficulty in transportation.

Q: To what extent did you attempt to use native Japanese coal to continue your steel production?

A: The Japanese coal is light coal and isn't suitable for use with iron and steel. The domestic HOKKAIDO and KYUSHU coal has little strength and needs a mixture of coal from North China to be used in a blast furnace.

Q: Was much damage caused by air raids to your coke ovens?

A: Our coke ovens in YAWATE ANSHAN and other places were severely damaged by B-29 raids.

Q: Could you elaborate on the difficulties of transportation that you experienced?

A: I'll point to the map to make myself clearer. The route which runs from TOKYO to KOBE is Japan's most important railroad. Here curvature is slight, grades are gradual and the weight of the rails is heaviest. We have a railroad system covering SOUTHERN HONSHU running from OSAKA to SHIMONOSEKI. This stretch is largely owned by private companies. There are steep grades and wide turns and the rails are extremely light. As we originally planned, all steel and coal from KYUSHU would come by ship through the Inland Sea up to OSAKA; however, with the increased weight of air attacks and submarine attacks on our shipping we found it impossible to carry out this plan. We were forced to transfer a great deal of the tonnage to this inferior railroad system in South Honshu. Even under the best conditions this would have been unsatisfactory; however, your air attacks made the situation almost fatal. Track was destroyed, water facilities were ruined and more over the fire bombing of cities along the way, such as Fukuyama, Tokoyama, Shimonoseki, and Hiroshima made the situation impossible. Transportation facilities were reduced 75% along this line.

Q: What was the effect of our destruction of the Aomori-Hakodatte rail ferry system?

A: Originally we had about eight ferries which plied between Aomori and Hakodatte. I think there is only one left. These ferries could transport about 300,000 tons of commodities, half of which was coal and the other half food stuff. After the attack, this capacity was cut to almost zero.

A: Were you able to substitute any other ships which could carry the tonnage?

A: I think that four ships which used to be on the Korea to Japan run were transferred to the TSUGARU STRAITS. I don't know their capacity.

Q: What steps were taken to protect the transportation system from air attacks?

A: As I have explained that Japan's transportation system is extremely vulnerable with the exception of fighter interception to combat the B-29 attacks there was little protection we could afford the railroads.

Q: In spite of B-29 attacks on various of their crucial industries, we have noticed that fighter protection was comparatively slight. Did the Admiral request the Japanese air force to protect these vital plants?

A: Of course, it was my duty to ask the war Ministry to protect them. I pressed it often.

Q: What was their reply?

A: They considered it very carefully. They understood the problem well enough and tried to do what they could.

Comment:

As we understand it, they felt it more important to save planes for defonse against invasion than to protect industries or transportation.

Q: What about the responsibility of aviation gasoline?

A: Since almost all the aviation gasoline was used by the Army and Navy it was directly controlled by them. The responsibility of the Munitions' Ministry was the establishment of areas which could be exploited for full production.

Q: Was the production of nitrogen and ammonia under the Munitions Ministry or the Army and Navy?

A: Although the production of ammonia and nitrogen was directly in the hands of the Ministry of Munitions, the Army and Navy was also anxious to see that its production was kept up. They actually controlled that industry. Our biggest problem was the allocation of materials to the Army and Navy.

Q: Since nitrogen plays an important part in agriculture, what percentage was allocated to this endeavor?

A: The percentage was 56% for agriculture and 44% for the military establishment, however, during the last stages of war, since there was such a critical shortage of ammonia, the Ministry of Munitions encroached upon the field of agriculture.

Q: Where did the responsibility of aircraft production lie? We understand that the Munitions Ministry had responsibility of this production. Did that mean that it also controlled aluminum?

A: Responsibility for aluminum lies in the Light Metals Bureau of the Munitions Ministry.

Q: Was the supply of aluminum adequate for the aircraft program in the last stages of the war?

A: Aluminum production was quite short at the end of the war.

Q: Was this due to the shortage of bauxite?

A: It was mainly due to transportation difficulties at the end of the war. Transportation of vital war material was cut because of the necessity for transporting food and salt since these two items were most vital for human existence.

Q: What percentage of salt was required for food and what percentage for chemical reasons?

A: For food and human consumption about 700,000 tons were necessary. Only 350,000 of this could be produced in Japan. We had to import the rest.

Q: How was domestic salt produced?

A: In general by evaporation of sea water by electricity.

Q: When did the food problem in Japan really become serious?

A: In October of 1944, it became critical.

Q: What percentage of Japan's food supply was domestic?

A: I think you have a general report to the members of parliament which contains this information.

Q: You have been in both big business and in the Cabinet, how well were you informed of the progress of the war?

A: I understood by my instincts.

Q: In general was the Cabinet well informed?

A: The Cabinet was well informed during the last two years. They met every Saturday and Sunday and had the situation explained to them by Army and Navy officers.

Q: Did the Cabinet exercise any control of military and naval operations?

A: Practically none.

Q: And they probably didn't have any control in the selection of military leaders?

A: That is true.

Q: When you returned to the Cabinet this year was there any free discussion about the termination of the war?

A: No, it wasn't a matter for the Cabinet to decide.

Q: Was there any widespread realization of the hopelessness of the Japanese situation at that time from the general economic and military point of view?

A: No, but my instinct told me.

Q: What do you mean by instinct?

A: I felt that the productive power was decreasing day after day, of course that is fact.

Q: At what time did you feel that there was no prospect of going forward?

A: My feeling was that it began when the Marianas were seized and the B-29s' made their first approach. We thought that it would take 3 or 4 months to make the Marianas available for B29 operations, but you work much more quickly than we do.

Q: Was there any feeling that Germany might come out with some new weapon which would change the course of the war?

A: I had seen in the newspapers various reports of the possibility of a new weapon, but that was just rumors.

Q: Were the Marianas considered the last point of defense?

A: I don't think so, I think we might consider Okinawa. Anyone who has studied your tactics in Europe prior to your landing in France would have realized what steps you would undertake to render Japan helpless - particularly attacks on transportation and distribution facilities.

Q: Was there any one time when you felt shipping losses had become so severe that you couldn't possibly hope to correct them?

A: Actually our shipping situation has been difficult for a long time.

Q: Well, how far back was the shipping really ba d and decisive?

A: About last fall.

Q: Do you think a blockade without an invasion and without B29 raids would have been decisive?

A: That is a question we must study very carefully. Some people said that the blockade alone would have been fatal and others said not.