HEADQUARTERS
U.S. STRATEGIC BOMBING SURVEY
(PACIFIC)
APO #234
C/O POSTMASTER, SAN FRANCISCO

- RESTRICTED *

PLACE: Kawasaki.

DATE: 10 Nov. 1945.

INTERROGATION NO. 339

Division of Origin: Capital Equipment & Construction.

Subject: Visit to Tokyo-Shibaura Co.

Personnel interrogated and background of each:

Mr. TSUMORI ---- President.
Mr. KUBO ------ Vice President.

Where interviewed: Office of the Kawasaki Plant.

Interrogator: Pfc Jacobson

Allied Officers Present: S/Sgt Stauffer

Summary:

Discussion on the production of electrical equipment and the results of bombings and difficulties encountered.

DISTRIBUTION: All Divisions.

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INTERROGATION

About 50% of the productive capacity of Tokyo-Shibaura was damaged by air raids. A shortage of labor and materials at present prevents the company from producing more than 25% of former capacity. About 60% of the whole electrical industry was believed damaged. This estimate includes home industry production.

The Tokyo-Shibaura Co. manufactures about 60% of all transmitter tubes and 70% of all receiving tubes in Japan. Two main factories, Kawasaki plus Yanaga are engaged in the manufacture of these tubes, in the Tokyo Area. About 70% of all incandescent lamps were made by this company. Before the war it specialized in lamps and tubes but during the war was one of the three leading Radar producers of Japan.

Hitachi Electric Co. manufactures about 35% of all electrical machinery compared with 25% for Tokyo-Shibaura.

Peak production for this company was reached in the October 1944 - March 1945 period.

There was no production for civilian needs during the last year of the war. In 1944 about 20 to 25% of all electrical production was the share of this company. Production amounted to over 700 million yen.

Underground dispersal was attempted but the program was not completed at the end of the war. More than 20% of machines were dispersed. More than this was not possible because buildings were so difficult to obtain. Former school buildings were extensively used, with their pupils used as operatives.

Production in this company kept rising until March 1945 when the first raids started. If these raids had not occurred, production could have been maintained even though the lack of raw materials and labor made it difficult to maintain production.

Nickel, copper, soda ash, mica (towards end of war), coal (1943) and electric power (beginning with 1939) were shortages. It was necessary to work on a 7 day basis to keep up with the demand for production of electrical products. Night work was almost impossible during the winter. A transportation shortage was felt particularly as far as shipping was concerned in providing raw materials. This began to be felt in 1943. In spring of 1944 a railway transportation shortage was beginning to be evident.

About May of 1944 a shortage of labor was felt. Men engaged in research were deferred from the draft, at this time. Much of the skilled labor was drafted but on a limited scale exemptions from the draft were obtained. About 10% of the labor was able to be held or deferred. Young men at the age of 20 that had no military training were difficult to hold from the draft. Skilled labor for work in manufacture of electrical machinery was particularly hard to get.

The quality of machines made was lowered during the war because of material and labor difficulties and did not pass final tests in the plant, thus repair work was necessary before these could be shipped.

When the bombings started machines were moved to other buildings and a night shift was tried but all this proved difficult to keep products even a low level. If the bombings had not occured in March 1945, production was planned to be increased because of the great demand especially for radar.

The amount of government assistance was very small. (All executives seem afraid to admit the extent of subsidization) Industry was left to provide its own means of increasing production according to Tsumori. Expansion was not aided by the government except in a few small plants where they provided steel for the construction of new buildings. For the most part wood was used for new construction. Also additional buildings were purchased from other companies. Factories engaged in the production of textiles, porcelain, confectionery, etc. were purchased in order to increase the production of military goods.

About 70% of communications parts were obtained from home industries; for motors 20% of parts was subcontracted. Damage to these small companies affected the manufacture of electrical equipment to a great degree.

The government seemed to demand more radios than there were aircraft. In 1944 there were more aircraft than radios and in 1945 again there was more radios than aircraft. A shortage of vacuum tubes was felt in 1942. In 1943 the demand for vacuum tubes was very heavy, and so vacuum tubes for other than military needs were cut off almost entirely. Military orders were usually much larger than industry could actually produce. Expansion and increased production was always encouraged. About 70 to 80% of the military demand was filled.

Beginning with 1943 much more labor was added to maintain the demand for production. Through the use of women and children in the factories to replace skilled labor, the efficiency standard was lowered to one-third of the pre-war standard for skilled labor.

Full capacity was maintained on a one-shift basis (capacity figured on a 10 hour day basis). In special cases about 5% of the workers worked on an overtime basis. The government encouraged a two-shift day but this was almost impossible to do because of shortage in food, housing and transportation for commuters.

A definite wire shortage was felt largely due to lack of wire drawing equipment and particularly the finest types of wire. No particular shortage of materials was felt in the manufacture of heavy equipment. Many machine tools had to be delivered without motors because the order for the machine but not the motor was placed. Thus the machine would be delivered but could not be operated because motors were not available. It was believed that the production of motors could have been met if proper planning were used. The efficiency of machine tools was lowered when the demand for them became greater. Specialization in the various types of vacuum tubes was great, involving great production difficulties. Quality deterioration was stated to be insignificant for all important uses.

It usually took about one year to receive machinery after it was once ordered. Generally speaking the machinery imported from other sources was more efficient than the ones produced in Japan itself. Single purpose machines were of the good quality but the universal machines were of poor quality. It took two years to get the single purpose machinery after the order was placed. Some special vacuum tube machines were made in the plant itself for its own use but none of these were sold elsewhere.

Emphasis was placed on the loss of foremen for vacuum tube production. This was vital loss, considering the relative lack of skill the school children (machine tenders) had, more careful supervision of production of lamps and tubes was necessary in 1944 and 1945.