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

INTERROGATION NO: 399

PLACE: Tokyo  
DATE : 20 November 45

Division of Origin: Capital Equipment and Construction

Subject: Navy Industrial Association

Personnel interrogated and background of each:

Mr TACHIBANA -- Managing Director of Electrical Section  
of Navy Industrial Ass'n (KAIGUN KOGYO KAI);  
Chief of Electrical Section of Army-Navy-Air  
Industrial Ass'n (KOHKU KOGYO KAI).

Where interviewed: Meiji Building, Room 340  
Interrogator : Pfc Jacobson  
Interpreter : None  
Allied personnel present: S sgt Stauffer

SUMMARY

Control relationships, the production trend, and  
difficulties of the Electrical Industry during the  
war.

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## I N T E R R O G A T I O N

The Navy Industrial Association was organized in November 1941. The Army-Navy-Air Industrial Association was organized in January 1944. Mr TACHIBANA pointed out that the Navy Ministry controlled production. The Navy Industrial Association received orders from the Navy, but the allocation of raw materials and new machinery was handled by the Association.

Electrical equipment produced for the Navy was estimated at  $2\frac{1}{2}$  billion yen or more, and for the Air Force, 1,250,000,000 yen (half of what the navy received) for 1944. Difficulties that the Navy and Air Forces had with electrical equipment: shortage of copper in 1941 and 1942; iron and steel in 1943-44. Copper was not as serious a shortage as iron and steel. Thin wire was also a bottleneck in 1944-45 because Air Force Machinery needed much of this for small motors, wiring of aircraft, etc. These shortages were overcome by the government's stopping production of civilian products. Production increased rather than decreased even when the shortages of material were evident.

Wire and cable of all kinds proved to be one of the outstanding finished product shortages. The reason for this shortage was said to have been the rapid change of types of ships, desired by the Navy. Radio, radar, etc., production was greatly handicapped by the shortage of small wires. The demand for vacuum tubes increased steadily, but the "capacity" of the communications companies was not adequate.

Labor: At the end of 1942 difficulties with labor began. The demand of the government for increased production became ever greater. Students were employed beginning with 1944. Raw materials and labor ran about the same as causes of bottlenecks in production. The government aided in procuring both labor and materials in order that industry could meet the demands of the Armed Forces.

Subcontractors: 70% of all communications equipment parts were subcontracted, while 30% of electrical machinery parts were subcontracted. These subcontractors were made up of every type of factory and home industry available because of the vast need for parts. The subcontractors were generally supplied with material by the parent factories, who were in turn supplied by

the allocating agencies. In 1943 it was difficult for companies to obtain materials, so it was necessary for subcontractors to procure their own on the black market, and in this way prices went up considerably. The subcontractors had no transportation in many instances to obtain the material from, or supply parts to the parent plants, so the plants had to send out their own workers to pick up the materials. Toward the end of the war such delivery was done on foot. Wire and cable subcontracting was very minor.

Subcontractors became more and more important as the war continued. In some instances, subcontractors supplied as many as five factories with parts, and could under those circumstances raise their prices considerably.

Transportation: The transportation bureau of the Munitions Ministry sometimes aided industry by supplying emergency transportation.

Fine Wire: A shortage of wire-drawing machinery proved to be the main difficulty in the inability to maintain production of fine wire.

Control of Orders: The Navy Ministry ordered the quantity of communications, machines, batteries, etc. that was desired, and handed this figure to the Association; the Association in turn would place orders with the various plants for manufacture of the finished product. The Navy never consulted the Association on what could be produced, but kept pressing larger demands. In order to meet these demands industry had to expand. The Munitions Ministry would help in such expansion by making buildings of non-essential industries, such as textile plants, available for the manufacture of war products. The government gave permission to industry to obtain additional labor and materials to meet increased demand. Transportation was generally not allocated. Skilled labor was obtained right from the Navy itself to aid in factories toward the end of the war. This was necessary for the rapid completion of vital orders.

Production Trend: Toward the end of 1944, peak production was obtained. The shortage of raw materials on the open market and rapid changes in design were the main reasons why the communications industry did not expand as rapidly as was desired.

If air raids had not occurred in 1945, production would have leveled off but would not have dropped because the military was constantly pressing industry. The plan for Air Force electrical equipment was to increase production sharply in 1944 and to maintain the level in 1945, \*

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so that sufficient equipment would be available. Production in general began to level off in the first quarter of 1945. The influence of production of Air Force equipment was said to have been the main reason for the sharp rise in production in 1944. The main reason for the initial losses in production was the incendiary raid on Tokyo in March 1945. From the time of this raid production began to drop off steadily.

**Dispersal:** Dispersal began in 1944 on a small scale. Large scale dispersal began in May or June of 1945. Production dropped considerably after the raids because of a housing shortage, transportation difficulties, damage, and dispersal. Only parts of the electrical industry dispersed. These were selected by the Munitions Ministry and consisted largely of communications manufacturers. Loss of labor and disrupted transportation were factors that would have held industry from maintaining production even if the war had not ended, for facilities at the dispersal sites were entirely inadequate to handle the extra burden of industry dropped in their laps.

Protective defensive measures were practiced as early as 1935 under the assumption that war would occur in later years. The actual building of shelters began in 1943, and thereafter the people had to make shelters out of wood because the government controlled other materials and would not allocate them for such purposes. Even wood was difficult to obtain in 1943-45. Production began to drop sharply in the spring of 1945.

Deterioration in Quality of Materials: It was difficult to obtain high quality materials such as special steels, chemicals, etc, and thus the quality of equipment was affected. Technological development was also retarded by the quality of materials and scarcity of some materials, such as nickel and other rare metals.

**Prices of Materials and Products:** Prices were twice as much or more in 1945 than they were in 1940. The price of raw materials would normally increase before the price of finished products. Wages were twice as high during the war as they were in 1935. Total income was increased also by overtime during the war. The government controlled wages. Wages of subcontractors were considerably higher, so labor was sometimes pirated from the larger companies by the subcontractors.