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March

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

INTERROGATION NO. 334

PLACE: TOKYO

DATE: 30 OCTOBER 1945

Division of Origin: BASIC MATERIALS DIVISION.

Subject: PRODUCTION AND ALLOCATION OF LIGHT METALS.

Personnel Interrogated:

OYA, Atushi — President, Light Metals Control Association.

YOSHIDA, Ichiro — Chief Director, Light Metals Control Association.

Where Interviewed: TAKASHIMAYA DEPARTMENT STORE, TOKYO.

Interrogator: Lt. FREEDMAN.

Interpreter: Lt. BOHANNAN.

Other Allied Officers Present:

Lt. BEYER.

Mr. COLWELL.

SUMMARY

The Light Metals Control Association (Keikinzoku Tosei Kai) operated through a subsidiary company - The Imperial Light Metals Distribution Company - for the purchase and distribution of primary aluminum and magnesium ingot and part of secondary production.

Japan's bauxite stockpile at the beginning of the war was estimated at approximately 210,000 tons, or about seven months supply at the existing rate of production. Quantities of raw materials required per ton of aluminum were considerably higher than U.S. practice indicates as necessary.

The major shortages in the aluminum industry (aside from bauxite, and later of aluminous shale) were coal and soda ash. Electric power and labor supply were minor problems.

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This first interrogation of the Light Metals Control Association officers was concerned chiefly with ascertaining statistical data available in the Association and explaining requests for data on production, stocks, and allocation of the light metals. In the course of the interrogation the following additional information was obtained:

SECONDARY PRODUCTION.

Secondary aluminum production from "new" and from "old" scrap were routed through different channels. "Old" scrap was collected and remelted in two plants - one near Tokyo, and the other in Osaka - from whom it was purchased by the Imperial Light Metals Control Company and allocated almost entirely for non-aircraft uses. "New" scrap - that is cutting and processing wastage - wascollected and returned to three fabricating plants - Sumitomo, Furukawa, and Kobe Steel - for rechannelling within the aircraft industry. This segment of secondary production was stated as not controlled. It does not, therefore, appear in allocation figures.

BAUXITE STOCKPILE DATA.

Although early bauxite stockpile figures are not available, Mr OYA estimated that Japan's bauxite supply at the beginning of the war was about 210,000 tons, or about seven months supply at the current rate of u.ilization

RATIO OF RAW MATERIALS TO ALUMINUM PRODUCED.

The bauxite - aluminum ratio was given as 5-1, wet, and 4.5-1, dry. The aluminous shale--aluminum ratio was given as 8-1, using the lime-soda process under improved conditions. The early rate was 12-1 and higher.

OPERATIONS OF THE IMPERIAL LIGHT METALS DISTRIBUTION COMPANY. (Teikoku Keikinzoku Haikyu Kaisha.)

As in other industrial fields, the Association operated within the allocation system through a subsidiary company - the Imperial Light Metals Distribution Company. Early in the war the company bought ingot at the calculated cost of production of the individual firms, and in turn sold it to authorized consumers at the average of these costs. Later, however, costs rose so rapidly that subsidies had to be resorted to. The finished aluminum so purchased was sold on a sliding scale according to quality. The subsidy early in 1945 approximated ¥ 10,000 per ton. Aluminum costs early in the war were Y-2,000-2,500 per ton for a first class producer. By late 1944 costs had risen to ¥ 5,000 for aluminum produced from bauxite and reached ¥ 14,000 per ton for aluminum produced from aluminous shale.

DIRECTLY ELECTROLYZED SHALE.

The direct electrolysis of shale was resorted to, Mr. OYA asserted, in order to economize on the use of soda ash. In addition, the crude product was easier to use with Bayer equipment than the raw shale. The typical product was 80-85 percent aluminum, 8 percent iron, and about 12 percent silicon. Some directly electrolyzed shale was stated to have been used directly for castings, but most was reprocessed by alumina plants.

REPAIR OF BOMB DAMAGE.

Questioned as to the efforts made to expedite restoration within the industry after bomb damage, Mr. OYA stated that after the cutting off of bauxite shipments, the industry was operating; at a rate considerably below capacity, particularly aluminum reduction plants; hence no great effort was made to expedite repairs. In particular, the government made no special effort to aid aluminum plant repairs. The rather low priority on light metals plant repairs was further influenced by declining demand due to bombing of the aircraft industry. The TAKAO plant in Formosa, which was partially destroyed, was not to be repaired, but it was proposed to transfer the plant to Southern Manchuria, close to the source of raw materials. The plan, however, was never carried out.

SHORTAGES IN THE INDUSTRY.

Among major shortages affecting aluminum production soda ash was stated to have been particularly short; pitch coke was also short; but in the period close to the end of the war the major shortage was coal. Power was usually adequate because of the high priority given to the aluminum industry, and was particularly no problem after the air raids had begun because of the great decline in demand from other sources.

The quantity of soda ash available gradually decreased throughout the war due to the difficulty of importing salt. The course of caustic soda supply was parallel. The shortage of soda ash became severe by the middle of 1944, and decreased steadily from that period to the end of the war. The rather startling opinion was stated that even with more bauxite available, the shortage of soda ash might have limited output, or forced a conversion to other than the Bayer process.

The pitch coke shortage resulted in a resort to inferior materials (of lesser purity) which resulted in a decreasing purity of product. But this problem was of less importance than that of coal or soda.

From the standpoint of fulfillment of labor requirements, the light metals industry was stated to have been relatively well off. The industry required no great quantities of skilled labor; hence the problem of labor did not loom large during the war. During the period of peak production - the first half of 1944 - the total labor force in the aluminum industry numbered approximately 45,000.