

Aluminum Smelting

In late March this year, two Japanese aluminum smelting plants were closed. The closings, only the latest in a long series of shutdowns, were further proof of the deepening crisis in the aluminum smelting industry. One plant, at Sakaide in Kagawa Prefecture, had been operated by Ryoka Light Metal Industries Ltd., a subsidiary of Mitsubishi Chemical Industries. The other was the Miike plant of Mitsui Aluminum Industry Co. in Omuta, Fukuoka Prefecture. Their disappearance left the Kambara plant of Nippon Light Metal Co. in Shizuoka as the only plant still in operation in Japan.

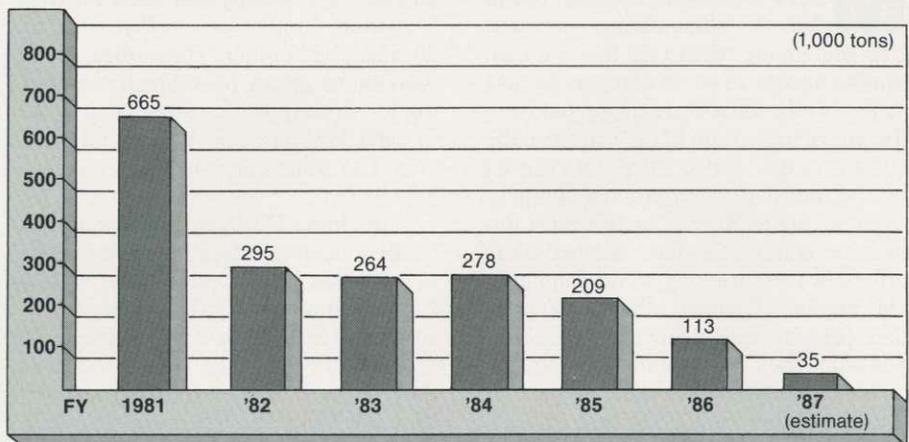
The situation shows up in the statistics as well. Japan's total production of aluminum ingots for fiscal 1987 (April 1987 to March 1988) will be the lowest since 1950—35,000 tons. That compares with a peak output of 1,188,000 tons in fiscal 1977. Of annual domestic demand for the invaluable metal—about 1.8 million tons—more than 98% is now being met by imports.

Aluminum smelting, an energy-guzzling industry, completely lost its international competitiveness after two rounds of sharp energy price increases in the 1970s. The yen's rapid appreciation since the autumn of 1985 dealt a further blow to the already battered industry. The cost of electricity in Japan—some ¥13 per kilowatt-hour—compares with the world average of about ¥4 to ¥5 per kilowatt-hour. Japanese smelters are in no position to compete with those in Venezuela and other low-cost producing countries.

Cheap imports have priced Japanese products out of the domestic market. The international price of aluminum ingots was ¥320,000 per ton at the end of 1985. Today it is ¥220,000, only 40% the historical high of ¥580,000 in 1980. The yen's appreciation hit the industry particularly hard because domestically produced ingots are traded on the basis of prices calculated from dollar-denominated international quotations.

A cut in import duties has also deepened the plight of domestic aluminum smelters. The tariff went to 5% from 9% in April this year and will drop to 1% in January 1988. It is a forgone conclusion that imports of low-cost ingots will increase

Domestic Production of Aluminum Ingot



even further. The writing on the wall is clear. Japan's aluminum smelting industry is on the verge of complete collapse under the onslaught of falling market prices, a high-flying yen and lower tariffs.

In February 1986, Showa Light Metal withdrew from the smelting business. Sumitomo Aluminum followed suit in October of the same year. With two more firms pulling out of this money-losing operation earlier this year, Nippon Light Metal is now the only survivor in a once world-class industry. Not coincidentally, it is also the only one to own its own hydroelectric power plant. Even so, the company's 35,000-ton output is down 27% from 1986.

Showa Light Metal's withdrawal from smelting displaced 600 employees. Fortunately, most found employment with Showa Denko, the parent company, in its own alumina division or were transferred to affiliated aluminum processors. With the unprofitable smelting operation now behind it, Showa Light Metal is, as Showa Denko officials put it, "mounting a new offensive." Surplus manpower has been put into areas that stand to gain from the strong yen—ingot imports and producing new types of products in aluminum processing.

Three large projects are under way abroad to develop and import ingots. They are the Venalum project in Venezuela, in which Showa Denko acts as consortium leader; the Asahan project in Indonesia, headed by Sumitomo Aluminum; and the Amazon project in Brazil,

led by Mitsui Aluminum. Production is already under way in all three. Previously, the Amazon and Asahan projects faced serious financial difficulties, forcing the Japanese partners to put them back on course. Now, however, Japan's growing demand for imported ingots means a brighter future for all three undertakings.

When Mitsubishi Chemical Industries closed its smelting plant in Sakaide, it reassigned employees to nearby plants for new materials and chemical products. Thus for all practical purposes, Mitsubishi has withdrawn completely from aluminum operations. The other four companies, however, are seeking new opportunities in aluminum processing. Nippon Light Metal, for example, has reassigned employees from its old Tomakomai and Kambara plants to three operations—high-purity alumina, a raw material for fine ceramics; high-purity ingots, used in electronics; and aluminum foil processing for electrolytic condensers.

The aluminum industry is shifting rapidly from "upstream" ingot smelting to "downstream" aluminum processing. Aluminum itself is still a promising metal, given its light weight, the ease with which it can be processed and the value of alumina, an intermediate product, in fine ceramics. The industry today is entering a new era, one in which it will be required to restructure its operations while securing long-term imports of low-cost ingots. ●

(By Akira Kishine, business news correspondent, the *Nihon Keizai Shimbun*)