

# Japan watching

## Energy crisis brings a cutback in Plant investment for FY 1973

The equipment investments being made by 88 steel producers have been cut by \$120 million from the original plans for investment of \$2.5 billion in fiscal 1973, according to a recent announcement by the Industrial Structure Council, an advisory body to the Prime Minister. This cutback would make the actual investment about two percent below the investment made in fiscal 1972.

The cutback is the result of a request from the government to postpone or suspend capital spending as part of the anti-inflation policies of the government.

## Energy shortage to cause Reduction in copper output

Production of electrolytic copper during January is expected to be reduced by approximately 32% to about 58,000 tons; far below the 83,000 ton output experienced in November.

The cutback is based on the expectation of further government directed cuts in available power and oil, presently set at 20 and 10% respectively. Inventories are presently at the 61 to 62,000 ton level in the producer warehouses.

## Steel industry asks speed-up In direct reduction project

The steel industry has requested the government to speed-up the direct reduction project by authorizing expenditures of about \$3.9 million during the first part of 1974 that would under the original plan be spent much later in the six year program. This request was made after considering the energy crisis effects on the industry.

## Import of a high temperature gas Reactor planned

The Electric Power Development Co. announced plans to import a High-Temperature Gas Reactor rated at 770 MVA for power generation from General Atomic International of the United States. The only other similar reactor of significant size is scheduled for start-up in mid 1974 in Pennsylvania and has a rating of 330 MVA. Enriched uranium and thorium fuel will be purchased from the U.S. Atomic Energy Commission. The HTGA will be the core of a large industrial center planned by the government.

## Sheet titanium made by rolling Titanium powder

The National Research Institute for Metals has developed a technique for rolling and sintering titanium powder into sheets. According to the Institute staff

their method, as compared to conventional forging or rolling processes, is simpler, eliminates the surface oxidation problems, and provides for high yield rates.

Titanium powder, between 100 mesh and 325 mesh, is fed between two rolls, each 300 mm in diameter and 366 mm wide, operated at a rolling force of about 50 tons. Optimum roller speed was found to be 6 rpm. The rolled sheet is carried into a vacuum sintering furnace heated to 1,300°C for one hour. At the end of sintering the sheet is hot rolled into finished sheets.

The product has a tensile strength of 30 to 40 kg per sq mm and elongation of 20 to 25%.

## Off-gas desulfurizing unit Installed at Kawasaki's Chiba Works

A sintering plant off-gas desulfurizing unit has been installed at Kawasaki Steel Corp.'s Chiba Works near Tokyo. This desulfurizer, costing \$2.3 million can hourly treat 120,000 normal cu meters of gas. Rate of desulfurization is estimated at more than 90%. Coupled with electrostatic dust precipitators, it also makes possible efficient collection of dust.

The new facility serves two sintering machines at Chiba Works which together discharge 440,000-480,000 normal cu meters of waste gas hourly. Kawasaki Steel uses four such sintering machines at Chiba to make iron-ore agglomerate as a blast furnace feed.

Although huge in quantity, the sintering plant off-gas is featured by low concentration of sulfur dioxides and high dust content. What is more, the sintering process is such that off-gas emission rate itself varies widely from hour to hour. All these had stymied the development of an effective unit to remove sulfur from the sintering yard off-gas.

The desulfurizing equipment just installed incorporates the lime-calcium

sulfate process which, developed by Mitsubishi Heavy Industries, Ltd., captures sulfur dioxides in the off-gas by using cream of lime as a reacting agent. Cream of lime, reacting with sulfur dioxides, turns into calcium sulfate which, in turn, is oxidized into the gypsum slurry. The slurry, then, is dehydrated by thickeners and centrifugal separators. About five to six tons of gypsum of the marketable quality are daily reclaimed through this process.

## Silver industry dependence on Imports increases during 1973

The production of silver, unworked and partly worked, during 1973 amounted to about 1,192 tons, an increase of some 2.2% over the previous year. Consumption expanded by a much wider margin to 2,095 tons. Due to the increased consumption the dependence on imports increased by 84% from the amount imported in 1972. Mexico is the largest source, accounting for approximately 53% of the total. Other major sources were Australia, North Korea, Indonesia, Burma, and Poland. Imports from the United States fell to almost nothing. The production and consumption are given below:

	1971	1972	1973
Production: (Kg)			
Primary	965,946	962,125	972,707
Secondary	192,158	204,237	220,000
Total	1,158,104	1,166,362	1,192,707
Imports: (Kg)	277,384	545,729	1,006,000
Consumption: (Kg)			
Silver Nitrates for Photographic Materials	684,578	663,194	784,000
Silver Nitrates for Other Uses	97,988	121,536	136,000
Brazing Alloys	128,360	162,556	211,000
Plating	60,101	96,632	121,000
Sheet, Tube, Rod, and Wire	150,564	165,381	191,000
Silverware and Decorative	80,484	117,529	128,000
Other	245,378	360,791	524,000

## Japan and Korea agree on Credits to expand the Pohang Steel Works

Agreements were recently signed by the Japanese and South Korean Governments concerning the yen credit required to finance expansion of the Pohang Steel Works. Credit of some \$50 million will be made available through the Export-Import Bank of Japan for equipment and material. The loan would be repayable over a 15 year period at an interest rate of 6%.

The No. 2 blast furnace, with an inner volume of 2,200 cu meters capacity, the No. 3 basic oxygen converter of 100 ton capacity, two continuous casting mills with annual capacity of about 800,000 tons each, a large shape mill, a cold rolling mill, and a zinc coating mill will be installed in the second stage expansion program. It is expected that the expansion will be completed by early 1977. When completed the capacity of the Pohang Works will be about 2.6 million tons of crude steel per year. ■



**SINTERING PLANT off-gas desulfurizing unit recently installed at Kawasaki Steel Corp.'s Chiba Works can treat 120,000 normal cu meters of gas hourly.**