

RESOURCES

Importance of Tin to Defense Stressed in Minerals Yearbook

Despite All Efforts To Accumulate a Stockpile, Best Estimates Place Supply at Only Year's Needs

ONE reason for the tense interest with which the United States government is watching Japan's southward grabs is disclosed in the chapter on tin in the new *Minerals Yearbook*, which will be published this month by the U. S. Bureau of Mines. Despite all efforts to accumulate a stockpile of this vitally necessary metal, the most optimistic estimate sets the supply now on hand at only a little over a year's normal consumption. While increased imports from Bolivia and other parts of the world will help, there is nowhere near tin enough in sight wholly to replace the Indo-Malaysian supply should it be cut off.

Of the 169,500 long tons of tin used in the world last year, this country consumed nearly half—76,000 tons. Britain accounted for 32,000 tons, or nearly half of the remainder. This was substantially more than the combined tin utilization of the combined Axis powers, which totaled 26,500 tons. (The tons in these reckonings are long tons of 2,240 pounds, not the more familiar short ton of 2,000 pounds.)

Britain has long had a near-monopoly of tin smelting. In normal years about half of the world's supply has been smelted in British Malaya, and an additional quarter in the British Isles themselves. Most of the remaining fourth has been smelted in the Netherlands, the Netherlands Indies, and China.

It has never been considered economically advisable to set up tin smelters in the United States, because the finished product could be purchased abroad more cheaply than it could be produced from imported ore in this country. Now, however, with a war emergency staring us in the face, one smelter has been contracted for, to be built at Texas City, near Galveston. It will be government-owned, but operated under contract by an American affiliate of one of the larger Dutch firms. Its cost is to be \$3,500,000, and its annual output 18,000 tons of refined tin.

Bolivia is the only important tin-

producing country in the Western Hemisphere—which accounts, perhaps, for the recent determined efforts of Nazi agents to produce political turmoil there. The United States has contracted with several Bolivian mining concerns to purchase annually for the next five years sufficient ore to produce 18,000 tons of tin.

The war is having the effect of sending smelters to the mines, instead of shipping ore to smelters in the countries around the North Sea. Netherlands Indies ore, overtaxing the capacity of smelters on the spot, is at present being shipped to smelters in British Malaya, while additional plant capacity is being erected. Ore from the Belgian Congo, cut off from the homeland, is coming

RESOURCES

Crude-Oil Reserves Reached New Peak on January 1, 1941

DESPITE the possible oil shortage in the eastern part of the country, on account of transportation difficulties, the crude-oil reserves of the United States, consisting of supplies "in sight or extractable by present methods and at approximately current prices reached a new peak on January 1, 1941."

This is revealed in the *Minerals Yearbook*. At the beginning of 1941, says the yearbook, quoting the American Petroleum Institute, the total reserve was 19,025,000,000 barrels, compared with 18,483,000,000 barrels a year before. At present rate of use, this is a 13-year supply. During 1940, 1,894,000,000 barrels of reserves were discovered and developed.

Summarizing world production, the report says:

"The estimated world production of crude petroleum in 1940 was 2,149 million barrels—a gain of 70 million or 3.4%. United States production rose from 61% of the world total in 1939 to 63% in 1940—a gain of 87 million barrels;

to the United States, but smelters are being erected in the Congo as well.

At present, the Axis powers are not known to be suffering from any tin shortage. Their tin consumption has always been more modest than that of the English-speaking nations, and in their rush over the Low Countries and northern France in the spring of 1940 they captured sufficient stocks to last for some time. In addition, Germany may have been receiving some East Indian tin via Japan and the USSR before the outbreak of the new Nazi-Soviet war. Since there are no significant bodies of tin ore anywhere in Europe or North Africa, the pinch may be felt in the Axis lands if the war lasts more than another year or so.

Suggestions that tin cans be collected and de-tinned are not received too optimistically by metallurgists. There are commercial de-tinning plants, but they operate mainly on the clean scrap from tinplate plants. Crushing and baling tin cans from city dumps is a marginal industry, practicable only when the price of tin is high, but perhaps justifiable in emergencies like the present.

Science News Letter, August 9, 1941

production in the rest of the world declined 16 million barrels. Russia showed no substantial change, while output in Venezuela decreased 21 million barrels, in Iraq 5 million, and in Rumania 3 million. Colombian production gained 4 million. Increased exports of crude and refined oils to the United States from Caribbean countries partly offset the loss of their continental European markets and helped to maintain their crude output at a higher level than might have been expected.

"In the United States the new production of all oils increased by 91 million barrels, rising from 1,319 million in 1939 to 1,410 million in 1940. This output, however, exceeded demand, as indicated by an increase of 39 million barrels in the stocks of all oils compared to a decrease of 41 million in the stocks of all oils in 1939."

As usual, 1940 set a new record for domestic motor fuel demand, with 589,424,000 barrels, an increase of 6% over 1939. Even greater was the increase in fuel oil. (*Turn to page 93*)