

It Can Be Done—

5000-CARGO PLANE PROBLEM STUDIED

Calls for Enormous Volumes of Critical Raw Materials
But U. S. Would Find Way to Get

Them, Writer Says.

(This is the second in a series of articles on the problems involved in Henry J. Kaiser's cargo-plane program.

By JOHN F. CRAMER

WASHINGTON, Sept. 16.—The builder of 5000 extra cargo planes, such as those proposed by Henry J. Kaiser, would need enormous volumes of critical raw materials.

But his requirements would be relatively small when matched against—

Our own present production;

The production of our North and South American allies;

The additional production available to us if we are willing to pay the cost of developing low-grade ores.

For instance, the man who builds 5000 extra cargo planes in the next 30 months will need approximately 175,000,000 pounds of aluminum a year—about 12 per cent of our 1942 output as reported by war production board's aluminum-magnesium branch.

He will need 10,000 tons of copper a year—less than 2 per cent of our 1938 output as reported by the census bureau.

Mars Used as Basis

He will need 750 tons of nickel a year—less than 1 per cent of the peacetime 1938 output of our ally, Canada, as reported in a 1940 handbook of the army and navy munitions board.

This article presents, for the first time, the volume of metals needed to produce 5000 extra cargo planes. It estimates the metals necessary for the planes themselves and for all the necessary new plants.

The estimates on the planes themselves are based on a pound-by-pound breakdown of the critical metals in Glenn Martin's huge flying boat, the Mars. This breakdown was obtained from the navy department. The figures on the metals needed for new plants were obtained from competent engineers.

The estimates in every case, are very liberal.

Figure on Doing It Hard Way

In preparing them, it was assumed that the builder of 5000 extra cargo planes would have to "do it the hard way."

It was assumed, for instance, that there would be needed complete new facilities for the production and fabrication of aluminum, for building huge aircraft engines, and for assembling the cargo planes.

In every case, due allowance was made for losses incurred in machining and fabricating the necessary metals.

Based on navy figures, here are the metals necessary for 5000 extra cargo planes:

Steel (of non-electric furnace grades)—not to exceed 25,000 tons.

Steel (of electric-furnace alloy grades)—not to exceed 45,000 tons.

Nickel—not to exceed 900 tons.

Chromium—not to exceed 1500 tons.

Magnesium—not to exceed 10,000 tons.

Silicon—not to exceed 375 tons.

Manganese—not to exceed 2200 tons.

Cobalt—not to exceed 275 tons.

Molybdenum—not to exceed 100 tons.

Copper—not to exceed 8000 tons.

Aluminum—not to exceed 175,000 tons.

Metal Needed for Plants

Based on estimates of competent engineers, the figures below are the metals needed to build and equip all the necessary new plants. These would include:

1. Complete new aluminum facilities, including alumina plants, ingot aluminum plants, a rolling mill, forging plants—everything.

2. A complete new aircraft-engine plant to build 30,000 engines of 2000 horsepower—four engines for each flying boat and a 50 per cent reserve of spares.

3. Necessary aircraft assembly plants—either the nine shipyards proposed by Henry J. Kaiser, or other facilities.

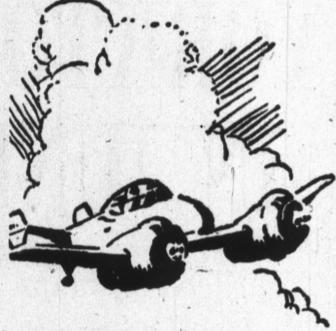
There are the figures:

Ordinary steels—not to exceed 170,000 tons.

Steel (of electric furnace alloy)

**What You Buy With
WAR BONDS**

U. S. Navy fighting planes are fast, powerful and deadly in dog fights with enemy planes. Based on carriers, they have given splendid accounts of themselves in their engagements with the Japs in the Pacific and Far Eastern waters. A navy fighting plane costs about \$165,000.



Production lines in many American plants are rolling these planes off the assembly lines night and day. We must have them to whip the axis powers. You can help get them for our brave American fliers by investing at least 10 per cent of your income in war bonds every payday. If you have not already done so, join up with your payroll savings plan at your factory or store. Or buy bonds regularly at your bank, postoffice, or other issuing agent.

U. S. Treasury Department.

grades—not to exceed 3000 tons.

Nickel—not to exceed 600 tons.

Chromium—not to exceed 1000 tons.

Silicon—not to exceed 125 tons.

Manganese—not to exceed 1300 tons.

Cobalt—not to exceed 75 tons.

Molybdenum—not to exceed 100 tons.

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