

METALLURGY

Scientists Pool Knowledge, Report Data to WPB

Over a Hundred Reports Already Submitted on Metals And Minerals; Indicate Direction for New Research

SCIENTISTS of the United States are making their knowledge and experience available for the war effort through committees of the National Research Council of the National Academy of Sciences. A great stock of information already in existence has been thus pooled, and has been placed on record in well over a hundred reports furnished to the War Production Board and its predecessor organizations. Directions which new research should take have also been indicated.

Especially important has been the work of the Metals and Minerals Advisory Committee, of which Clyde Williams, director of Battelle Memorial

Institute, Columbus, Ohio, is chairman. This committee has already turned in well over a hundred reports. About half of them are on metals substitution and conservation, a little less than half on ferrous minerals and ferro-alloys, with several additional reports on tin smelting and reclamation and on non-metallic minerals.

A very considerable proportion of the reports are concerned with three "bottleneck" metals, aluminum, magnesium and manganese. The first two are basic materials for aircraft, the third is a key material in modern steel-making. With all three, our present difficulties arise largely from the fact that before the war the respective industries naturally utilized only the highest-grade sources, which were most easily worked. Now, however, these "cream" sources are not sufficient to meet the enormously expanded demand, and scientists are called upon to tell what may be done about realizing values from some of the "skim-milk" ores.

Other investigations of the committee range through the whole alphabet of the minerals, from antimony and asbestos to zinc and zircon. In some

cases, rarer and more costly metals may become replacements for those that are more abundant and cheaper in normal times; as in the substitution of lead-silver solder for the old familiar lead-tin solder, thus releasing tin for use where it is more urgently needed.

This set-up of a national clearing-house for scientific ideas and information in a nation at war continues a tradition that goes back to the administration of President Lincoln. In 1863 he chartered the National Academy of Sciences as a means of making the then existing scientific resources of the country available for the use of the federal government.

During the first World War the National Research Council was organized as a committee of the Academy, to carry on the same kind of work in the vastly more highly developed fields of science that had come into being since Reconstruction days. The Council continued in existence during the interim between the first and second World Wars, and now again attacks the task, with greatly expanded personnel and facilities.

Science News Letter, August 8, 1942

Wild mules found wandering in the jungles of New Guinea are being broken in, by Australian horsemen, in their native python-infested valleys.

Statisticians have calculated that nearly 5% of the American population, or 6,000,000 people, will at some time during life be legally committed as *insane*.

SYNTHETIC

These photographs and those on the facing page show steps in the process of making artificial rubber from petroleum. At left is part of a new butadiene plant now under construction. Next is the huge reactor in which butadiene is polymerized to form a latex-like fluid—the white stuff being drawn off in the bottle. At right, the "latex" is being coagulated by agitation with acids.

