

SOCIOLOGY

Post-War Job-Planning

Over 1,000 American cities and small towns are already taking action to provide post-war jobs for returning soldiers and demobilized war workers.

► IN OVER a thousand American cities and small towns, action is already being taken to plan for after-the-war jobs for returning soldiers and the men and women released from war industries, it is indicated by reports and letters received by U. S. Department of Commerce officials.

Surveys are being made by local communities to assay the resources of the locality in plant facilities, skilled labor, raw materials that might be useful in the new industries expected to develop as soon as peace makes it possible. Fact-finding searches are being made for post-war opportunities in manufacture of new war-born plastics, light-weight metals, new fertilizers, new farm machines and new food processing industries.

It is known that soldiers coming home after the war will be trained in hundreds of technical jobs that will fit into industries yet to be. Concerning many of these, officials can not even speculate out loud, because details regarding them

are in the secret class. Now these details might be of help to the enemy. It is generally known, however, that soldiers trained to operate and service modern devices of war in the field of radio, for example, will be expertly fitted to develop and build startling new instruments to make the post-war world more comfortable and more fun to live in.

And the men and women trained in war plants to work with the new plastics for building all sorts of things from canteens to airplane parts, can open up whole classes of manufactures for more colorful and convenient homes and offices when peace comes.

As a means of combining plans for post-war employment with plans for better community living when peace brings more time to individuals, communities are also beginning to inventory the local opportunities for social and recreational activity, for schooling and for civic betterment.

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MEDICINE

Eye Flash Exposures

Greater protection of welders' eyes from intense light of welding arcs may be achieved by use of new rule for estimating safe exposures.

► A PRACTICAL method for giving the 100,000 or more welders in the nation's shipyards greater protection from "eye flash" was described by Dr. Philip Drinker, of Harvard School of Public Health and the U. S. Maritime Commission, at the conference on industrial medicine held in Boston by the American Mutual Liability Insurance Company.

The method was worked out in cooperation with Dr. V. Everett Kinsey and Dr. David G. Cogan of Harvard Medical School, and details are reported in the *Journal of the American Medical Association* (Oct. 16)

The probable danger to the eyes in any given welding situation, these scientists found, can be determined by meas-

uring the intensity of light from the welding arc with a light meter calibrated in foot candles. The measurements must be made at night to avoid interference by sunlight. The light meter does not measure the ultraviolet light from the welding arc, which is what does the damage to the eyes. In special experiments with a tantalum photoelectric cell and click meter, however, it was found that the light meter readings paralleled the ultraviolet radiation and so could be used as a guide in determining exposure to dangerous amounts of ultraviolet.

Part of the experiments were made with laboratory animals and part with human volunteers who held their eyes

open seven feet from a welding arc for periods of 20 and 30 seconds. From these tests, the scientists believe that about 150 foot-candle minutes would represent the average exposure coefficient necessary to produce minimal eye injury in half those exposed to the radiation.

A person working near where welding was being performed might, for example, accumulate through repeated exposures during the day a total of 15 minutes of exposure. He would be in danger of eye trouble if the intensity at the distance he was from the arc was 10 foot candles or more.

A minimum standard of safety for those in the neighborhood of electric welding arcs, the scientists recommend, would be one-tenth the time and intensity of radiation required to produce minimal effects on the eyes. Since it would be difficult in actual working conditions to determine the probable time a person might be exposed, it would be safer to provide protection in the form of shields or goggles unless a safety factor of about tenfold could be allowed.

Actually, the idea of "flash" exposures is not in line with the time of exposure found necessary to produce symptoms, the scientists found. They state that there is apparently little need to provide protection for persons who will only be exposed to the welding arc momentarily.

Any spectacle or goggle having a thickness of two millimeters or more, whether colored or not, they point out, will provide practically complete protection from electric arc welding if there are shields at the sides.

Science News Letter, October 30, 1943

AERONAUTICS

U. S. Navy's Flying Boats Superior to Jap Plane

See Front Cover

► A MARTIN MARINER is shown in an official U. S. Navy photograph on the front cover of this week's SCIENCE NEWS LETTER. It leaves a white-ribbon wake as it lands in the harbor of an east coast Naval Air Station.

These twin-engine, gull-wing patrol bombers fly for the Navy on anti-submarine patrol, protect convoys and operate as cargo carriers for the Naval Air Transport Service. They have a range of 3,000 miles, compared with the Japanese Kawanishi, which has a range of 2,100 miles. The Martin Mariners also have an even greater superiority in bomb-load capacity.

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