

WAR DEPARTMENT
AIR CORPS
MATERIEL DIVISION
OFFICE OF THE CHIEF OF DIVISION

WRIGHT FIELD, DAYTON, OHIO

January 22, 1932.

Dr. R. A. Kehoe,
Keltering Laboratory,
College of Medicine,
Cincinnati, Ohio.

Dear Bob:

Many thanks for yours of the 19th instant.

I am interested in your findings on lead excretion of our group of lead handlers. I agree that the results are a little disturbing and we will tighten up further on handling. We have already tightened up as a result of Siebenthaler's recommendations. The amount of mixing is to be sharply reduced and the lead will be weighed out. This will, I think, cover the cases of Connolly and Stolzenburg, although the two of them, and Leaf as well, will be more strictly supervised in the future by J. Spatz, their foreman, while handling lead.

With regard to Lt. [REDACTED] I think his high excretion is due to somewhat casual handling of lead bromide. Your results will, I think, be sufficient to correct this situation. [REDACTED] however, points out that his specimens, taken over three or four days, represent a full two days' average excretion.

You may remember that Maxwell Bates blamed lead bromide fume for his illness. He died recently and autopsy revealed carcinoma of the lung.

I am forwarding your letter to Major Wilmerding.

With regard to the question of drilling glass, I attach very rough sketches of the method used. The taper shown on the drill is not essential but helps to prevent jamming. A light pressure on the drill is used and it is lifted from the work about every thirty seconds to cool the glass and allow access of fresh cutting compound. I am sending you a quart can of dry compound so that you will not need to experiment with different grades.

For small holes a copper tube with a plug driven in at the chucked end will serve nicely. For cutting tube, a similar method can be used. A copper strip is fitted to a hacksaw frame, the tube wrapped with sheet metal to provide an edge to guide the saw and compound (in oil) applied frequently. It is then only a matter of

Dr. R. A. Kehoe,
January 22, 1932,
Page 2.

patience and brawn. In many cases, a copper disc driven on a spindle and fed with compound could well be used for cutting tube or sheet, etc.

You will be surprized to find how fast the charged copper cutting tool will penetrate glass. It also cuts fire brick and similar refractories very nicely.

Kindest regards.

Yours sincerely,

S. D. Heron

S. D. HERON

P.S. I have had your report copied & am sending one copy to a branch of the Navy with whom I frequently argue about safety in handling lead. Connolly is to be taken off lead handling for at least three months at the expiration of this period you may desire fresh specimens.