

Sub-Department of Industrial Health,
Institute of Hygiene,
THE UNIVERSITY,
GLASGOW, W. 2
TEL. WESTERN 3991.

8th January, 1947.

Robert A. Kehoe, Esq., M.D.,
University of Cincinnati,
College of Medicine,
Kettering Laboratory of
Applied Physiology,
Eden Avenue,
Cincinnati, Ohio, U.S.A.,

Dear Dr. Kehoe,

Very many thanks for your very full and interesting letter of December 26th, 1946. I am inclined to agree with you that less trouble may be expected in the United States than in this country from lead poisoning, owing to the fact that the ships to be broken up in America are mostly of recent construction and are not heavily painted. The problem in this country is, however, rather different in that at present a considerable number of Naval vessels are due for breaking, and as many of these are old ships with sometimes as much as a quarter of an inch of paint adhering to their sides, I fear we must anticipate quite a number of serious cases of lead poisoning unless we put into effect the most strenuous preventive measures.

Professor Ferguson, my chief, and I are entirely at one with you in discounting the usefulness of group haematological examination. Naturally we are familiar with the work of Tompsett here, and appreciate that his techniques may well provide valuable information in small pilot surveys.

I shall investigate the type of respirator you mention made by the Mine Safety Appliances Company in the U.S.A. The Mark VI respirator authorised by the Factory Department in this country is reasonably efficient, but it may well be that the respirator you mention is superior.

Again very many thanks for your letter.

With kind regards,

Yours sincerely,

John Rogan

John Rogan, M.D.

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December 26, 1946

John Fogan, Esq., M.D.,
Sub-Department of Industrial Health,
Institute of Hygiene,
The University of Glasgow, W 2.
Scotland.

Dear Dr. Fogan:

I am more than sorry that I am unable to tell you at this time just what practice has been developed in the United States for the avoidance of undue lead exposure in shipbreaking. As all of us who have had any experience are aware, this problem has given rise to serious difficulties in periods such as the present, and in general the efforts made to avoid serious exposure have not been very successful. I think there is much less likely to be as much trouble now as in the past, since in a great many instances the use of paint on the outside surfaces was somewhat scanty on account of the fire hazard. Moreover the inside surfaces, in the main, were somewhat thinly coated. At least this was true of most of the vessels that were turned out in large numbers as freighters.

Certainly some effort has been made in the United States to use a type of mask that would reduce the inhalation of lead fume, but it has been very difficult to enforce the use of such respirators, and the result has not been any too good. The idea which you have advanced sounds to me like a good one, for this procedure, if measurably successful, would certainly greatly reduce the gross quantity of available lead. I shall be very much interested in knowing what procedures you finally adopt, and in hearing about the degree of success that accompanies these efforts.

I intend to write to one or two of my colleagues who ought to know more about what is being done in this matter than I do. It so happens that I have not been closely associated with the Maritime Commission in any of its activities, and therefore have not been asked for any advice from this source.

With respect to the usefulness of routine hematologic examination in this connection I can only express a profound skepticism. We have never found that hematological changes of any kind would be correlated adequately with the severity of lead exposure, except on the basis of comparisons made on the data obtained from rather large groups. The individuals within the groups react so variably, that it can be counted upon, in our experience, that from 40 to 50% of any group will give substantially normal findings, regardless of the severity of the exposure. Consequently

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I do not consider this type of work to be worth the time and trouble required to do it. In fact, in any type of actually hazardous exposure, I should not be prepared to trust any kind of tests except those carried out with minute accuracy in determining the lead concentrations in the blood and urine of exposed individuals. I recognize that such tests are not always feasible, and that in the situation which you have in mind, they would probably be impracticable. On the other hand, if you were interested in obtaining a limited number of data on a number of carefully chosen subjects representative of the exposure under examination, you might find that suitable samples of urine could be collected and analyzed by proper means. I mention this with some degree of hopefulness because of your location in Glasgow, since I am familiar with the work and publications of Sidney L. Tompsett. The methods of lead analysis employed by Tompsett and his associates are, I believe, of such accuracy as to justify confidence in the results, provided samples of urine and/or blood could be obtained without danger of contamination. If this should turn out to be feasible and, if I could be of any assistance to you in suggesting methods applicable to field observations of this type, I should be very glad to be called upon.

It occurs to me also to point out to you that Mine Safety Appliances Company in this country has made available a type of respirator which has a simple blotter type of filter that has a very high efficiency in the removal of lead fumes. The use of this mask has made it possible to do away with canister or air line masks for work involving this type of hazard, and therefore a very considerable amount of protection can be provided without the undue handicaps that workmen of this type object to so seriously. It would seem probable that Siebe-Gorman and Company, Neptune Works, Davis Road, Tolworth, Surrey, may have developed or at least may have knowledge of a similar type of respirator. I should think they might be helpful, therefore, in this.

Sincerely yours,

Robert A. Kehoe, M. D.

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