

METAL PROGRESS

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7016 EUCLID AVENUE
CLEVELAND, OHIO

December 20, 1938

Dr. Robert A. Kehoe
College of Medicine
University of Cincinnati
Eden Avenue
Cincinnati, Ohio

Dear Dr. Kehoe:

I find that I have so far failed to acknowledge with thanks the very fine letter you wrote me on December 6 concerning threshold value for lead poisoning in its mildest form. Rest assured that I will use this material with discretion.

Very truly yours,



E. E. Thum

EET:MR

Editor - Metal Progress

KE 0007500

N 7924

December 6, 1938

Mr. E. E. Thum
Editor - Metal Progress
7016 Euclid Avenue
Cleveland, Ohio

Dear Mr. Thum:-

Since our exchange of correspondence of some weeks ago, I have had some information about the problem of lead in steel which leads me to believe that your worst fears are likely to be realized. My information is confidential and to some degree it is also hearsay, but I have reason to believe that in some of the plants the lead fume in the atmosphere is grossly in excess of the most optimistic estimates of safe exposure.

The expression "threshold value" as employed in your letter, is an entirely correct one. It means in effect the level of exposure which is just short of a magnitude which will produce lead poisoning in its mildest form. This magnitude has been somewhat variably expressed, but the figures given in your letter must either be incorrect with respect to the decimal point or else there is something wrong with my mathematics. In any case the figure is not customarily expressed in the manner in which you have given it. The first valid expression of this threshold, so far as I know, was given by Legg and Goadby in their book on lead poisoning and lead absorption. Their statement is to the effect that if the atmosphere in a plant does not contain particulate lead in excess of 5 milligrams per 10 cubic meters, cases of lead poisoning would not occur at all, or would be very mild. Since their time measurements of lead in the atmosphere have been carried out by somewhat different methods than they used. The figure for the threshold in terms of present standard methods of analysis is somewhat lower than their figure. In at least one of the states, medico-legal practice has sanctioned the figure of 1.5 milligrams of lead per 10 cubic meters of air when determined by standard impinger methods. I believe this figure is a little low though it is certainly a good one to shoot at. My own experience leads me to believe that the presence in the atmosphere of

quantities not in excess of 2 milligrams per 10 cubic meters is safe. This value is equivalent to .0057 milligrams per cubic foot, or .00009 grains per cubic foot.

Very truly yours,

RAK:ls

Robert A. Kehoe, M.D.

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