

HEALTH & SAFETY REPORT

From the Director of Health and Safety
Lead Industries Association, Inc.
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Look Ahead with Lead

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To Members of the Lead Industries Association, Inc.:

In the current issue of the A.M.A. ARCHIVES OF ENVIRONMENTAL HEALTH (December 1962) there are several articles which have more than usual interest.

"Air Lead Concentrations from Automotive Engines" by Richard S. Brief is an experimental comparison of potential exposure to lead from combustion of gasolines containing TEL and tetramethyllead. The author has simulated car operating conditions in the laboratories of the Esso Research and Engineering Company and measured the ambient concentration of lead in the atmosphere surrounding the automobile and inside the driver's compartment. The results of these air tests are given and show little or no variation between the use of the two organic lead additives.

"Occupational Exposure to Organic Lead Compounds" by Robert T. P. defreville, M. D.; Harry U. Wheeler; and Theodor Sterling, is the report of a study by the Kettering Laboratory of actual exposures to workers engaged in the production of TEL and TML (tetramethyllead). This study was needed in order to evaluate any effect which might be due to the somewhat different physical characteristics of TML over TEL. The results of the study showed no significant exposure differences between the two compounds. There is a great deal of interesting data on atmospheric concentrations of the lead compounds together with physiological (blood and urine) data.

"Summer Tunnel Air Quality" by Ralph I. Larsen and Virgil J. Konopinski is a rather complete report containing considerable data covering ambient air concentrations inside this mile-long Boston vehicular tunnel. Carbon monoxide, particulate dust, lead and other materials were measured and their ambient air concentrations recorded. One of the interesting measurements made was a comparison of the amount of lead consumed per vehicle mile both as calculated and measured. The calculated value showed that .15 grams of lead are burned per vehicle mile of tunnel travel, which, when reduced to air-borne lead, postulates that .035 grams of air-borne lead per vehicle mile should be present in the tunnel atmosphere. The actual amount of lead collected in the sampling procedure was .031 grams per vehicle mile, which was of course excellent agreement with the theoretical amount.

I recommend all three of the articles to you as being interesting examples of current lead research.

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