

LEAD INDUSTRIES ASSOCIATION

430 LEXINGTON AVENUE

NEW YORK 17, N. Y.

April 12, 1955

SUBJECT: REPORT OF SECRETARY
AND TREASURER

To Members of the Lead Industries Associations

Enclosed please find Report of the Secretary and Treasurer, for the year 1954, to be presented at the Annual Meeting to be held on Wednesday, April 27, 1955, at The Drake Hotel, Chicago, Ill.

Very truly yours,

Robert L. Frazier
Secretary.



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REPORT OF THE SECRETARY
Summarizing the Activities
of the
Lead Industries Association
For the Year 1954
GENERAL SUMMARY

In my report to you a year ago I pointed out that since World War II the course of events in our industry had demonstrated an inability to consume, without stockpiling, all the lead that can be produced. In fact, supplies have exceeded actual consumption in that period by some 1,000,000 tons. This situation still exists despite better consumption abroad and consumption at a rate of 1,100,000 tons in the United States in 1954. Another significant fact is that average annual per capita consumption of lead in the U. S. in the five years ended in 1929 was 15.1 lb., and in the five years ended in 1954 was 14.5 lb., a reduction equivalent to about 50,000 tons a year on present population. (See table attached) A substantial change in the pattern of lead consumption can also be noted.

I raised the question last year whether our industry was taking full advantage of its opportunities to expand the markets for lead and its products and cited some fields to which more attention might be devoted, for example radiation shielding, ceramics and cable sheathing. (It is interesting to note that the use of lead in ceramics increased 12 per cent in 1954 over 1953 while overall lead consumption fell about eight per cent.) I am happy to report that during 1954 the Association laid a substantial foundation for more constructive action in this direction by the establishment by pig lead sellers of a new Industry Development Fund and the creation of a Technical Steering Committee composed of top technical personnel of both producers and consumers. Details of these two actions are given in the body of this report.

In addition, we have continued to promote the use of lead in building and as a material of chemical construction through the Metallic Lead Products Division, and of red lead as a metal protective paint through the Pigments and Chemicals Division. Our health and safety work has continued to be a major activity and one requiring more and more attention with the publicity given to childhood lead poisoning and the mass of regulations involving lead which many communities are promulgating. Our Solder Committee has also continued its work on the Soldering Handbook. A large amount of effort has gone into the preparation of technical and publicity articles and other material designed to disseminate more widely information about lead. Regular services like statistical and Information Bulletins have continued.

A pension plan for employees of the Association was set up effective January 1, 1955. It was financed from Ordinary Fund reserves and cost just under \$80,000 to the end of 1955. This substantially reduced Ordinary Fund reserves but still left them in the neighborhood of \$50,000 at the beginning of 1955.

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Incidentally, we are proud of our able staff and the low rate of turnover we have enjoyed. The pension plan is a fine recognition of this service and places the Association in a much better position to assure a capable, permanent staff in the future.

In the face of rising costs we have tried to make all possible economies consistent with effective operation. In that connection the possibility of occupying joint office space with the American Zinc Institute which could effect economies in certain departments was thoroughly explored, as our lease expires April 30, 1955 and a substantial rental increase was requested. Since the A.Z.I. lease did not expire for another year and since there appeared to be opposition to the move by some in A.Z.I. for various reasons, we have extended our lease for another year at an increase. Arrangements were made, however, with the Metal Powder Association to increase their payments to L.I.A. starting with January 1, 1955.

Substantial economies were made in salaries by a reduction in the size of the staff. Careful scrutiny of such items as travel expense, entertainment, telephone and others also effected economies.

Details of our various activities are reported on the following pages and it is hoped that members will take the time to read them. At the conclusion of the report will be found the detailed audited statement of our accounts.

The secretary-treasurer wishes to thank the entire membership for its loyal support and cooperation and to call attention to the valuable guidance and direction of the officers and directors who have devoted so much time and thought to the Association's affairs.

INDUSTRY DEVELOPMENT FUND

The sellers of primary pig lead sold in the United States, regardless of the country of origin, have established a fund to be used solely for industry development. Each such seller will subscribe to this Fund at a uniform rate per ton of lead sold, starting with January, 1955. Part of this money has been earmarked for the two promotional divisions of the Association - Metallic Lead Products and Pigments and Chemicals - where, combined with smaller amounts subscribed by manufacture of these products, it will be used to continue the work of these Divisions. Remaining money in this Fund will be used at the discretion of the subscribing companies for other industry development purposes. Establishment of this Fund will undoubtedly give the Association greater flexibility in its development activities.

TECHNICAL STEERING COMMITTEE

During the 1954 annual meeting of the Association, a group of top technical men from some of the member companies met informally to discuss the industry's technical and research problems. It came up with a recommendation to the Board that a permanent Technical Steering Committee be established to guide and advise the Board and the secretary in technical and research matters and to develop means of more widely disseminating accurate information about the properties of lead. In this latter way it was felt that others might be encouraged to develop new applications for lead by learning that its properties would help solve their problems. In December, this Committee was formally established by the Board and is now functioning.

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An immediate job before this Committee is to serve as an editorial board for an A.C.S. Monograph on Lead which the American Chemical Society has asked the Association to prepare, and which will be printed and published at no expense to the L.I.A. This appears to be an ideal way to accomplish one of the prime purposes of the Committee - wide dissemination of technical information about lead and its products which will encourage others to make use of lead and lead products in the solution of their own problems.

LEAD IN PLUMBING

The promotional work on lead plumbing is carried out under the Metallic Lead Products Division. At the start of 1954 the international plumbers union asked us to loan them one of our field men, Robert A. Camp, to help them set up and prepare for the first international apprentice contest it sponsored, which included an appreciable amount of lead work. Feeling that he could do us much good in that capacity, at no cost to us, we complied. After the contest in August, he was offered a permanent position as educational coordinator for the union at a figure beyond our ability to meet. He, therefore, remained with the union and our field work was conducted through the year by one man, Homer S. Yetsan. However, in Mr. Camp's new position he is still proving of great value to us. We further cooperated in the contest, which has now become an annual affair, by supplying the necessary lead for the apprentices to work with and a judge for the lead work, David M. Borcina, of our staff.

A major development in the plumbing field has been the rapid growth in the use of prewiped and machine-wiped joints on lead connections. This apparently has reached its fullest development in the southeastern and southwestern parts of the United States. In general, these joints are being made by independent firms who purchase the lead material from lead manufacturers and whose business is entirely devoted to making prewiped joints for sale through the usual channels.

A recent survey by us indicates an absolute minimum of 10,000 such prewiped joints per month being sold by just two companies in the southern part of the United States, with one manufacturer using about 100 tons of lead pipe and fittings per year for this purpose and another using two or three times that amount. To our knowledge there are at least ten companies now engaged in this work on various scales.

The advantage to us of the growth in popularity of this product is that prewiped joints are considerably less expensive than hand-wiped joints, particularly those hand-wiped on the job, the contractor knows his exact cost without a labor variable, and they eliminate the need for a large number of skilled lead workers. Thus lead plumbing becomes more competitive with other materials.

The use of this product is growing rapidly and it is our belief that this trend will continue despite the opposition in some quarters by union plumbers. Also we believe that the Association should encourage this development particularly in those areas where little or no lead is now being used and in such a manner as would not jeopardize our good relations with skilled lead working plumbers.

Insofar as can be determined the use of this development will not have to overcome any restrictive plumbing code provisions such as is encountered in introducing new competing materials and was encountered by the lead and cast-iron drive ferrules some years ago.

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Mr. Yetman continued the field work throughout 1954, speaking to many state and local meetings of plumbing contractors and journeymen plumbers, and to the national convention of the American Society of Sanitary Engineers. At that meeting he first called public attention to the availability of wiped joints through the usual channels, a statement which was singled out for attention in the report of the meeting.

PLUMBERS' FORUM

Two issues of "Plumber's Forum" were published during the year and mailed to our list of 30,000 plumbing contractors, journeymen, inspectors, instructors and wholesalers. One of the articles in the Forum describing lead plumbing in two large housing projects was reprinted in the "Journal of the National Association of Home Builders," picked up by the United Press, and reprinted elsewhere.

LEAD WORK TEXT BOOK

We have continued our efforts to increase the number of apprentice and journeyman classes in lead work and have enjoyed the support of our members who have supplied materials to those classes at low cost. Our text book, "Lead Work for Modern Plumbing" continued to sell well, nearly 1,000 additional copies being sold during the year. Since it first appeared about 5,500 copies have been distributed at a cost of only about \$2,000 to the Association. We are informed that the international plumbers union will make this text a part of its own training program which should create a demand for many more thousands of copies.

MISCELLANEOUS PLUMBING ACTIVITIES

More than 1,000 additional copies of our brochure, "Lead in Modern Plumbing" were distributed in 1954, bringing the total distribution since publication in 1951 to over 28,000 copies.

Mr. Yetman has continued to serve on the Plumbing Committee of the Building Research Advisory Board of the National Research Council and was a member of the Committee which prepared the recently issued American Standard Plumbing Code by the American Standards Association.

Specifications for Chemical Laboratory Drainage Systems were completed, approved by members and mimeographed. Hundreds of requests for copies have already been received.

At the invitation of the international plumbers union and in space provided by them, we had an exhibit of lead plumbing at the annual Business Managers Conference of that union in Washington in January, 1954. This was a most important group for us to come before.

We also cooperated with the Murray Hill Trade School, New York, in preparation of a C.B.S. Television Show in December on which students at that school demonstrated wiping joints on lead service pipe as used in New York.

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SEAL OF APPROVAL

All Licensing Agreements for the use of the Lead Industries Seal of Approval were cancelled because of the possible financial liability that might be placed on the Association in the event of damage, and in view of the Association's inability to inspect all or even a large sample of material bearing the Seal. Some dissatisfaction with this step has been expressed and consideration of some alternative course may be warranted.

CHEMICAL CONSTRUCTION

Kempton H. Roll of the Association staff has devoted a large part of his time to the use of lead in chemical construction and related corrosion problems. As chairman of the Northeast Region of the National Association of Corrosion Engineers he has been in a good position for this work. He has been appointed general chairman for the next annual meeting and exposition of that national organization.

During 1954, four new Chemical Bulletins were prepared and circulated to members. Three additional Chemical Construction Bulletins were sent to our list of some 1,300 chemical construction companies, professors and students of chemical engineering, chemical manufacturers, and chemical engineers.

The annual review of lead and lead alloys as materials of chemical construction was again prepared at the request of the American Chemical Society for publication in the October, 1954 issue of "Industrial and Engineering Chemistry." Also, an article on bonded lead linings was supplied to "Quadrangle," publication of the College of Engineering, New York University.

Material for an article on "Lead Linings-Faster, Better, Cheaper," was supplied to "Chemical Engineering" and appeared in the February, 1954 issue. We assisted the editors of the same magazine in preparation of an article "More Than Holding Its Own: Lead" which appeared in the "Materials of Construction," 16th Biennial Report section of that magazine.

SOLDER

The Association's Solder Committee, composed of representatives of four member solder manufacturers, under the chairmanship of D.M. Borcina of the staff, met several times during the year. Its work of preparing a Soldering Handbook to be published by the American Welding Society is nearing completion. Some of the members of this Committee, with Mr. Borcina as moderator, presented a panel discussion on solder before a meeting of the New York Section of the American Society for Metals.

MISCELLANEOUS METAL PRODUCTS ACTIVITIES

The section on "Lead Base Materials" for an "Engineering Materials Handbook" to be published by the McGraw-Hill Book Co., has been prepared by the Association. It will set forth in detail the properties, forms, uses and other pertinent data of use to engineers about lead and its alloys.

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We assisted the editors of "Materials & Methods" in preparation of the physical and mechanical properties of lead, fabricating properties, corrosion resistance, and available forms and uses for the "Materials Engineering File Facts" which appeared in the October, 1954 issue of the magazine.

For the fifth successive year, the lecture on "Lead as an Engineering Material" was presented before 200 graduate engineering students at the Newark College of Engineering.

Mr. Roll served as chairman and Mr. Borcina as a member of the program committee of the New York Section of the American Society for Metals, and as such were able to see that lead received proper attention at the meetings of that organization.

At the request of the author, the material on lead work for "Architectural Graphic Standards" was again reviewed and brought up to date by the Association for a 5th edition soon to be published.

The Association supplied the magazine, "National Roofer" with material for an article on the 3,000 lb. of lead flashing used on a model house in Vermont in accordance with specifications prepared by the L.I.A.

RED LEAD

Our work in the promotion of red lead as a metal protective paint pigment has been carried on under the Pigments and Chemicals Division. The technical director of that Division left our employ at the beginning of 1954. However, the Red Lead Technical Committee continued to function with Dr. L. L. Carrick of the University of Michigan as consultant, and Charles Cherry of our staff assigned half-time to the red lead work and serving as secretary to the Committee.

In 1954 two additional Red Lead Technical Letters, Nos. 8 and 9, were issued. They dealt respectively with "Primers for Railroad Structures and Rolling Stock" and "Red Lead Paints for Galvanized Steel, Rusted, Weathered or Treated New." The first was distributed to a mailing list of 9,500 and the second to 13,000. An article based on the latter has been prepared and accepted for publication by "Paint and Varnish Production" magazine. Work was also begun on another Technical Letter, to be published in 1955, which will include case histories of red lead applications instead of formulations.

The Red Lead Technical Committee met four times during 1954, one of these meetings being devoted to an inspection of the Committee's exposure tests. Two new exposure projects were initiated, one dealing with the addition of litharge to primers for galvanized surfaces, and the other to evaluating the merits of additions of flaked metallic lead to red lead primers.

An inspection of the continuing joint Navy-L.I.A. exposure tests was made by Navy and L.I.A. representatives in June. While no report has yet been made on those tests, indications are very favorable to red lead.

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Support of the Steel Structures Painting Council was continued and meetings of the Council and its Research Committee were regularly attended. Red lead formulations have been widely adopted in the Council's Painting Manual. Of particular significance in the second volume of the Manual, about to be issued, is the adoption of a red lead primer, suggested by an L.I.A. representative, as the standard one-coat shop primer for enclosed structural steel. This is said to be the most widely used primer in the steel industry and formerly contained no lead.

The Association is represented in the Signal Section of the Association of American Railroads and has submitted to it a quick drying red lead formulation as a substitute for a slower drying paint now in their specifications. It is the same as Navy Formula No. 116. Our representative also attended the annual meeting of the Federation of Paint and Varnish Production Clubs to keep abreast of developments and maintain liaison with that industry.

Monthly lists of persons requesting red lead literature have been supplied to our members who make red lead.

REVISION OF ATMOSPHERIC LEAD STANDARD

An activity that should be of great interest to members is the work of the Subcommittee on Lead of the Committee on Toxic Dusts and Gases of the American Standards Association, of which our director of health and safety, Manfred Bowditch, is chairman. The allowable limit for air contamination by lead and its more important inorganic compounds has for years stood at 0.15 mg. per cubic meter. The subcommittee is proposing an upward revision of this Standard which, if adopted, would afford relief to members from often onerous regulations. As two members of this subcommittee are also members of the governmental committee which promulgates similar standards (one as chairman) the belief is warranted that there will be uniformity in the figures ultimately adopted by both committees.

CHILDHOOD LEAD POISONING

This problem has been a major "headache" and source of considerable adverse publicity. Mr. Bowditch served as secretary to the American Standards Association's Subcommittee on Hazards to Children from Residual Surface Coating Materials of the Committee to Minimize Home Hazards to Children. A standard was developed and adopted by A.S.A. for toxic ingredients of paints for surfaces which may be chewed by children. The basic part of the standard has been accepted by New York City and Chicago health authorities, a step towards uniformity among municipalities unalterably determined to attack this problem by the seemingly futile means of warning labels on paints.

While that part of the Baltimore study of this problem for which our \$10,000 grant was made, was completed a year ago, the fact that it has been continued with funds from other sources has led to delay in the published report. However, four papers based on the work are being prepared and two should be ready for publication soon.

A rearrangement of the laboratory work on lead at Children's Medical Center, Boston, supported by us at an annual cost of about \$2,500 for many years, has effected a major saving and will cost us practically nothing during the current year. Meanwhile, Dr. R.K. Byers, who has conducted this work, published two papers based on it in 1954. They are "Urinary Excretion of Lead in Children: Diagnostic Application" in the "American Journal of Diseases in Children," and "Edathamil Calcium-Diisodiate (Versenate) in Treatment of Lead Poisoning in Children" in the same Journal.

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We have informally supported a program of the American Academy of Pediatrics for establishment of "poisoning control centers" in major cities to aid physicians in diagnosis and treatment of childhood poisonings. Statistics gathered by the Academy show that such agents as kerosene and aspirin are responsible for many more child poisonings than lead.

LABELING OF LEAD COMPOUNDS

Governmental requirements for warning labels on potentially toxic substances are rapidly on the increase. In addition to paint labeling regulations, at least seven jurisdictions (California, Hawaii, Illinois, New Jersey, New York City, New York State and Oregon) now require warnings on various lead compounds shipped by members. We have been able to secure acceptance of uniform wording in all these jurisdictions and will make every effort to extend this uniformity as required to avoid multiple labeling which might easily become intolerable. As a matter of fact, now similar legislation is now pending in Connecticut, Massachusetts and the City of Chicago and is receiving our attention. This illustrates the growing trend toward labelling legislation.

TYPE IV PAINT

The investigation under the guidance of Dr. H. B. Elkins of Massachusetts, initiated as a means of refuting the contention by a chemist of the Federal Government that the use of this paint on the interiors of potable water supply tanks would involve a lead poisoning hazard, is being continued for the life of the paints supplied by us for the purposes of this study. The nearly 200 analyses made of the waters exposed to the paint continue quite uniformly favorable and a satisfactory termination of the work seems now a foregone conclusion.

LEAD THERAPY

The relatively new drug known as calcium ethylenediaminetetraacetate, or "Ca EDTA," has continued to show itself of great value in the treatment of both adult and childhood lead poisoning. Its development is being carefully watched, and Mr. Bowditch spoke briefly on this subject at a session of the Industrial Hygiene Foundation in Pittsburgh last year.

PAINTED STEEL WELDING STUDY

The study of fume generation from welding and flame cutting of red lead painted steel has apparently been completed. We have not as yet received a report but merely a copy of a letter to the Navy Bureau of Medicine briefly outlining the results. The reception of the results received by the Navy and future developments are not yet clear.

PUBLIC HEALTH SERVICE LABORATORY SURVEY

As the result of our suggestion to them last fall, the U. S. Public Health Service is undertaking a survey of some 100 laboratories throughout the country to determine their competence in the analysis of biological materials (blood and urine), and probably also paints, for the percentage of contained lead. This should be extremely valuable to our industries in (1) telling them where they may safely turn for such service, (2) reducing the incidence of misdiagnosis of plumbism by physicians, and (3) bringing about improvement in the number and quality of such services available to industry and to the medical profession.

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LEAD IN MODERN INDUSTRY

The book, published by the Association in 1952, has sold over 3,000 copies to date. In addition about 1,100 complimentary copies have been distributed where, in our opinion, it would be particularly valuable to the industry to have them. For example, in 1954 a complimentary mailing of about 450 copies was made to the heads of metallurgical, chemical, civil, mechanical and architectural engineering departments in 95 colleges and universities. This mailing received an enthusiastic response and many complimentary letters were received from the recipients.

"LEAD" MAGAZINE

This publication was issued twice during 1954 and mailed to our list of some 35,000 architects, construction companies, utilities, railroads, chemical companies and other potential users of lead. Each issue contains a variety of articles on the use of lead, including plumbing, paint, chemical construction, cable, radiation protection and many others. Following each issue the Association receives a large number of inquiries for our other literature and for assistance involving the use of lead and its products.

BOOKS AND ARTICLES

An important part of the staff work is the preparation of promotional and educational articles about lead for magazines and books published by others and to keep an eye on many publications that refer to lead to see that the subject is handled properly. Some of these have already been mentioned in sections of this report dealing with specific uses of lead.

In addition, Mr. Borcina wrote the chapter on lead for an economic geography being edited by Prof. Albert S. Carlson, Department of Geography, Dartmouth College. He also checked and revised the sections dealing with lead in "New World of Chemistry" published by the Silver Burdett Co. Also reviewed and extensively revised was the section on lead for an encyclopedia set to be published by the National Lexicographic Board. An article about what the Association is and does was written for publication in the Encyclopedia of Chemistry, edited by Prof. George Clark of the University of Illinois, to be published by Reinhold Publishing Co.

A series of two articles on lead was written for "Railway Purchases and Stores" magazine and appeared in the December, 1954, and February, 1955 issues. The secretary of the Association, as usual, wrote the lead section for the "Engineering & Mining Journal" annual review issue, and also shorter articles on recent developments in lead for "Iron Age," and "Steel." He also again prepared the introductory text and summary for the lead section of the "Year Book" of the American Bureau of Metal Statistics.

The Association supplied photographs and drawings for the section on selection and application of paint in "Modern Farm Shop" recently published by the Steck Co., Austin, Tex., which contains excellent recommendations for white lead paint. It is one of the "Worktext" series for vocational agriculture students.

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PACKAGING

The Association's Packaging Committee did not meet during 1954 because there seemed to be little need. As an indirect result of this Committee's earlier deliberations, however, individual lead producers worked with individual consumers and succeeded in solving some of the problems brought out in Committee by producing one-ton blocks now being supplied commercially for some consumers, reportedly at a considerable saving to consumers who are equipped to use them.

STATISTICS

No changes in the statistical services of the Association occurred during the past year. However, several steps were taken to improve the statistics by getting greater cooperation from certain non-member consumers resulting in greater accuracy, particularly in the lead consumption and stock reports.

Members were provided with a convenient comprehensive report of U. S. lead production, imports, consumption and average yearly prices for the years 1925-54, compiled by the Association from recognized published sources.

To answer requests from several members we issued a complete report of the changes in the tariff on lead and lead products since 1930, as provided by the U. S. Tariff Commission, and supplied it to all members in March, 1954.

The secretary serves on several committees in Washington dealing with statistics, such as Industry or Government Advisory Committee on Schedule B Revision, Bureau of Census; and Advisory Council on Federal Reports, Standard Industrial Classification Code, Committee on Primary Metal Industries and Mining. He attended a meeting in March at which certain interests attempted greatly to curtail the lead statistical services of the Bureau of Mines. We made every effort to see that no curtailment would be made that would reduce the value of these services to our members, and with the help given us by members, we believe we were successful. In fact, the timeliness of Bureau reports has improved.

MEMBERSHIP

No changes in membership took place during 1954. Since the first of this year, however, three new members have been added - Pend Oreille Mines and Metals Co., a relatively new, important and growing lead mining company in the State of Washington, and two secondary smelters, Dixie Lead Co., of Dallas, and Aaron Perez and Sons Co., of Omaha.

MISCELLANEOUS

This report can not tell in detail of the hundreds of individual problems that come to the staff by mail, phone and personal visit, from both members and non-members. Many of these are time-consuming, but an effort is always made to assist the inquirer to the fullest of our ability. Much time is also devoted to maintaining liaison with the various technical and trade organizations and government agencies that have any bearing whatsoever on our products.

The Association is represented on the National Technical Task Committee on Industrial Wastes of the U. S. Department of Health, Education and Welfare, which met once during the year.

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We were again invited to attend, and accepted, the Annual Battery Conference sponsored by the Signal Corps Engineering Laboratories at Fort Monmouth, N. J. Members were provided with a report of papers of interest to the lead industry.

A lead panel was prepared by the Association as a part of a permanent periodic table exhibit at the Franklin Institute, Philadelphia. It includes a number of samples of lead products and an information card file giving more details of the properties of lead.

INFORMATION BULLETINS

These have been issued approximately monthly and require careful perusal of scores of publications. They are also a means of keeping members informed of important Association activities.

RADIATION SHIELDING

In recognition of the growing potential market for lead as a nuclear shielding material, your Association has attempted to keep abreast of developments. We have talked with a number of experts in the field to determine our position and what the industry can do to improve it. Our talks with the editor of "Nucleonics" magazine so interested him that he has informed us of his intention to have a study of shielding materials made for the magazine. He also told us of a book now in preparation on this subject for the McGraw-Hill Book Co. We have contacted the author and he is on our annual meeting program. He has been invited to relate some of the shielding problems to our Technical Steering Committee. We have also made plans to attend several nuclear conferences during the coming year, and attended an international nuclear conference sponsored by the American Institute of Chemical Engineers at Ann Arbor, Mich., during 1954.

CERAMICS

The potentialities of high lead content porcelain enameled aluminum were reported to the membership at the 1954 annual meeting by B. C. Bricker of the duPont Co. Indications are that during the year this product has made substantial commercial progress. This has led us to work closely with leading producers of the product and material is being gathered for publicity purposes. It has further led us to investigate other possibilities of expanding the use of lead in ceramics and it seems likely that efforts in this direction could meet with success. As mentioned earlier the use of lead in ceramics made a substantial gain (12 percent) in 1954 over 1953, when lead consumption was falling about 8 percent. It might be wise to cast our lot with a growing market and not delay until something else has made inroads on it, as this industry has so often done.

CABLE SHEATHING

Discussions with one of our cable manufacturing members have resulted in a suggestion from them that research be undertaken to find better cable sheath alloys. It is their feeling that such a program might protect the still sizable market for lead in their industry. The matter has been referred to the Technical Steering Committee for study and recommendations. We are active on the Cable Sheath Corrosion Committee of the National Association of Corrosion Engineers.

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PER CAPITA CONSUMPTION OF LEAD

	Average Yearly Consumption (a) (In short tons)		Average Yearly Consumption Per Capita (b) (In pounds)	
	1925-29	1950-54	1925-29	1950-54
White lead	123,900	23,800	2.084	0.303
Red lead & litharge	35,400	68,500	0.596	2.873
Storage batteries	195,000	354,500	3.280	4.520
Cable covering	180,400	139,700	3.034	1.781
Building	92,400	58,400	1.554	0.745
Calking	31,100	47,300	0.524	0.603
Tetraethyl	(c)	141,100	(c)	1.799
Ammunition	35,600	31,700	0.600	0.404
Foil	34,500	3,600	0.580	0.046
Bearing metal	33,200	29,900	0.558	0.381
Solder	36,200	69,600	0.608	0.887
Typometal	16,400	26,300	0.276	0.335
Other uses	<u>86,100</u>	<u>144,000</u>	<u>1.448</u>	<u>1.837</u>
Total	900,200	1,138,400	15.142	14.514

(a) A.B.M.S.

(b) Average U.S. population for the 5 years concerned, that is 1925-29, 118,908,000; 1950-54, 156,866,000.

(c) Included with "Other Uses"

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The Treasurer respectfully submits the report of the audit of the accounts of the Association as of December 31, 1954, by Maskins & Sells, as follows:

MASKINS & SELLS
Certified Public Accountants

67 Broad Street
New York 6

ACCOUNTANTS' CERTIFICATE

Lead Industries Association:

We have examined the balance sheet of Lead Industries Association as of December 31, 1954 and the related statement of income, expenses, and reserves for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying balance sheet and statement of income, expenses, and reserves present fairly the financial position of the Association at December 31, 1954 and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

(Signed) MASKINS & SELLS

April 1, 1955

LEAD INDUSTRIES ASSOCIATION

BALANCE SHEET, DECEMBER 31, 1954

ASSETS

CASH (including savings bank deposits, \$89,884.25).....	\$168,344.26
ACCOUNTS RECEIVABLE.....	1,761.31
ADVANCES FOR TRAVEL EXPENSES.....	2,275.00
AIR TRAVEL DEPOSIT.....	425.60
TOTAL.....	<u>\$172,845.57</u>

LIABILITIES AND RESERVES

ACCOUNT PAYABLE - Pigments and Chemicals Division Fund.....	8	459.12
RESERVES:		
Ordinary Fund.....	\$126,029.00	
Safety and Hygiene Fund.....	21,470.43	
Metallic Lead Products Division Fund.....	16,289.00	
Pigments and Chemicals Division Fund		
(including appropriation for research, \$1,750.00).....	5,597.12	<u>172,306.45</u>
TOTAL.....		<u>\$172,845.57</u>

NOTES:

- (1) The cost of furniture, fixtures, automobiles, and equipment has been written off to expense.
- (2) On November 30, 1954 a Retirement and pension plan was adopted for employees of the Association. The past service cost as of January 1, 1955, the effective date of the plan, was estimated to be approximately \$72,800.

LEAD INDUSTRIES ASSOCIATION
 STATEMENT OF INCOME, EXPENSES, AND RESERVES
 FOR THE YEAR ENDED DECEMBER 31, 1954

	TOTAL	ORDINARY FUND	SAFETY AND HYGIENE FUND	METALLIC LEAD PRODUCTS DIVISION FUND	PICHERTS AND CHEMICALS DIVISION FUND
INCOME:					
Membership assessments.....	\$111,097.00	\$ 84,149.00		\$25,548.00	
Transfer between funds.....		(21,500.00)	\$21,500.00		
Interest:					
on obligations of the United States.....	765.00	765.00			
on savings bank deposits.....	2,009.80	2,009.80			
Sales of publications.....	1,577.22	555.49		1,023.73	
Gain on sale of securities.....	134.13	134.13			
Total income.....	\$116,187.15	\$ 88,612.42	\$21,500.00	\$26,571.73	
EXPENSES:					
Salaries.....	\$ 84,090.85	\$ 52,101.71	\$15,217.00	\$10,600.00	\$ 6,171.66
Social security taxes.....	1,509.04	858.67	177.07	139.50	132.92
Rent and light.....	7,670.17	7,670.17			
Office supplies.....	2,275.60	1,641.85	115.57	169.99	348.19
Travel.....	13,561.43	4,366.04	2,298.67	5,799.81	1,076.99
Association dues.....	637.40	279.93	146.50	161.25	100.00
Entertainment and luncheons.....	1,947.98	940.60	871.41	652.87	83.30
Meetings (net of fees, \$2,192.50).....	1,875.64	1,133.76	92.99	679.39	187.50
Telephone and telegraph.....	1,928.27	1,561.88	196.93	192.48	31.98
Books and subscriptions.....	676.21	615.20	233.48	157.99	72.00
Printing - net.....	3,171.48	828.50	275.61	279.39	2,521.09
Mailing.....	3,547.48	1,614.64	141.07		1,491.88
Cost of publications:					
"Lead".....	3,354.90	3,354.90			
"Plumbers Lead Forum".....	3,136.28			3,136.28	
Furniture and fixtures.....	1,123.43	1,123.43			
Illustrations.....	439.15	130.48	169.78	146.61	2.32
Research and research materials.....	2,360.00		1,324.00		1,036.00
Consultation fees.....	847.50		100.00		747.50
Apprenticeship contest.....	358.81			358.81	
Miscellaneous.....	2,358.68	1,646.16	186.15	99.78	216.57
Metal Powder Association - for rent, services, etc.....	(13,000.00)	(13,000.00)			
Expenses - net.....	\$123,944.78	\$ 84,132.22	\$25,992.71	\$22,504.98	\$ 18,220.00
EXCESS OF INCOME (EXPENSES) FOR THE YEAR	\$ (7,757.63)	\$ 1,480.20	\$ 507.29	\$ 3,972.79	\$ (18,220.00)
RESERVES, JANUARY 1, 1954	178,398.06	128,046.08	23,963.18	12,316.21	16,068.03
APPROPRIATION (from accounts payable) - Research.....	3,750.00				3,750.00
RESERVES, DECEMBER 31, 1954.....	\$172,386.45	\$127,526.28	\$28,470.47	\$16,289.00	\$ 8,997.14

() Denotes red figure

LEAD INDUSTRIES ASSOCIATION

420 LEXINGTON AVENUE

NEW YORK 17, N. Y.

April, 1955

MEMBERS OF THE LEAD INDUSTRIES ASSOCIATION

Allied Smelting Corp.	5116 W. Lincoln Ave.	Milwaukee 11, Wis.
Alpha Metals, Inc.	Box 34, Bergen Station	Jersey City 4, N. J.
The American Metal Co., Ltd.	61 Broadway	New York 6, N. Y.
American Smelting & Refining Co.	120 Broadway	New York 5, N. Y.
Anaconda Copper Mining Co.	25 Broadway	New York 4, N. Y.
The G. A. Avril Co.,	Langdon Farm Rd. &	
Lead Products Division	Seymour Ave.	Cincinnati 12, Ohio
Bers & Company, Inc.	Ashland & Lewis Sts.	Philadelphia 24, Pa.
*Broken Hill Associated Smelters		
Proprietary Ltd.	Collins House	Melbourne 03, Australia
*Broken Hill South, Ltd.	Box 194-C, G.P.O.	Melbourne, Australia
Bunker Hill & Sullivan Mining and		
Concentrating Co.	Box 29	Kellogg, Idaho
Cambridge Smelting Co.	100 Pacific St.	Cambridge, Mass.
*Cerro de Pasco Corp.	40 Wall St.	New York 5, N. Y.
*The Consolidated Mining & Smelting	Box 300,	
Co. of Canada, Ltd.	Place D'Armes	Montreal 1, Canada
Day Mines, Inc.		Wallace, Idaho
Dickson Weatherproof Nail Co.	Box 590	Evanston 4, Ill.
Division Lead Co.	7742 W. 61 Place	Summit, Ill.
Dixie Lead Co.	P.O. Box 9131	Dallas, Texas
E. I. duPont de Nemours & Co., Inc.		Wilmington 98, Del.
The Eagle-Picher Co.	American Building	Cincinnati 1, Ohio
The Electric Storage Battery Co.	Box 8109	Philadelphia 1, Pa.
Ethyl Corp.	100 Park Ave.	New York 17, N. Y.
Euston Lead Co. (The Glidden Co.)	500 Penn Ave.	Scranton 3, Pa.
Evans Lead Division (National Lead Co.)	Box 1467	Charleston 25, W. Va.
Evans Metal Co.	Box 97, No. Side Br.	Atlanta, Ga.
Federated Metals Division of		
American Smelting & Refining Co.	120 Broadway	New York 5, N. Y.
Laron Ferer and Sons Co.	101-19 S. 8 St.	Omaha 8, Nebr.
*The Firestone Tire & Rubber Co.	Box F, Firestone Park	Akron 17, Ohio
The Fluor Lead Co., Inc.	52-01 31 Place	Long Island City 1, N.
V.P. Fuller & Co.	301 Mission St.	San Francisco 19, Cal.
Gardiner Metal Co.	4820 S. Campbell Ave.	Chicago 32, Ill.
Glaser Lead Co., Inc.	31 Wyckoff Ave.	Brocklyn 27, N. Y.
Goldsmith Bros. Smelting & Refining Co.	58 E. Washington St.	Chicago 2, Ill.
Hammond Lead Products, Inc.	5231 Hohman Ave.	Hammond, Ind.
Hoeft Mining Co.		Wallace, Idaho
Hudson Smelting & Refining Co.	85-95 Hyatt Ave.	Newark 5, N. J.
Imperial Type Metal Co.	3400 Aramingo Ave.	Philadelphia 34, Pa.
International Smelting & Refining Co.		
(Anaconda Sales Co., Agents)	25 Broadway	New York 4, N. Y.
The Johnston Felt Manufacturing Co.	6016-6120 S. Broadway	St. Louis 11, Mo.
Knapp Mills, Inc.	23-15 Borden Ave.	Long Island City 1, N.
Lead Products Co. Inc.	P.O. Box 1341	Houston 1, Texas

* Associate Member



April, 1955

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MEMBERS OF THE LEAD INDUSTRIES ASSOCIATION

John R. MacGregor Lead Co.	4520 W. 15 St.	Chicago 23, Ill.
Metro Smelting Co.	Ontario & Bath Sts.	Philadelphia 34, Pa.
Mike Horse Mining & Milling Co.	620 Power Bldg.	Helena, Mont.
The Murdock Lead Products Co.	P. O. Box 5298	Dallas 2, Texas
National Lead Co.	111 Broadway	New York 6, N. Y.
New Park Mining Co.		Kestley, Utah
*North Broken Hill, Ltd.	Box 1903-R, G.P.O.	Melbourne, Australia
Northwest Lead Co.	2700-16 Ave., S. W.	Seattle 4, Wash.
The Okonite Co.		Passaic, N. J.
Pend Oreille Mines & Metals Co.	Old Natl. Bldg.	Spokane 8, Wash.
Pennsylvania Smelting & Refining Co.	3100 E. Ontario St.	Philadelphia 34, Pa.
Phelps Dodge Corp.	40 Wall St.	New York 5, N. Y.
River Smelting & Refining Co.	4195 Bradley Road	Cleveland 1, Ohio
Rochester Lead Works, Inc.	380 Exchange St.	Rochester 8, N. Y.
St. Joseph Lead Co.	250 Park Ave.	New York 17, N. Y.
Shattuck Denn Mining Corp.	120 Broadway	New York 5, N. Y.
Sipi Metals Corp.	1708-1720 Elston Ave.	Chicago 22, Ill.
Standard Rolling Mills, Division of		
Revere Copper & Brass Inc.	196 Diamond St.	Brooklyn 22, N. Y.
Sunshine Mining Co.	115 N. Second St.	Yakima, Wash.
United American Metals Corp.	193 Diamond St.	Brooklyn 22, N. Y.
United Park City Mines Co.	Continental Bank Bldg.	Salt Lake City 1, Utah
United States Smelting Refining and		
Mining Co.	57 William St.	New York 5, N. Y.
The Victory White Metal Co.	6100 Roland Ave.	Cleveland 27, Ohio
Ryan Viener & Sons	5300 Hatcher St.	Richmond 5, Va.
Vulcan Lead Products Co.	1545 W. Pierce St.	Milwaukee 4, Wis.
The Wensley Metal Products Co.	1145 Osage St.	Denver 4, Colo.
Western Electric Co. Inc.	195 Broadway	New York 7, N. Y.
Western Lead Products Co.	4530 E. Pacific Way	Los Angeles 22, Cal.
White Metal Rolling & Stamping Corp.	80 Moultrie St.	Brooklyn 22, N. Y.
Winchester Repeating Arms Plant,		
Olin Mathieson Chemical Corp.		New Haven 4, Conn.
*The Zinc Corp. Ltd.	Box 384-D, G.P.O.	Melbourne, Australia

* Associate Member.