

LEAD INDUSTRIES ASSOCIATION

489 LEXINGTON AVENUE

NEW YORK 17, N. Y.

METALLIC LEAD PRODUCTS DIVISION

SUBJECT TO REVISION

METALLIC LEAD PRODUCTS DIVISION

Chicago, Ill.

April 22, 1954

A meeting of the Metallic Lead Products Division of the Lead Industries Association was held on April 22, 1954 at the Drake Hotel, Chicago, Ill.

DIVISION MEMBERS

PRESENT

G. H. Lefevre, Chairman
G. A. Avril
P. P. Barton
L. V. Feldman
Morris Foodin

C. J. Groes
W. F. Murdock
K. R. Dondorf
R. J. Lovar
R. W. McKeltrick
P. W. Ruppert
C. B. Rabuse
W. J. Welch
C. R. Ince
W. T. Isbell
L. A. Creglow
F. C. Sayers

REPRESENTING

United States Smelting Refining & Mining Co.
O. A. Avril Co., Lead Products Div.
do
Division Lead Co.
Federated Metals Div., American Smelting
& Refining Co.
do
Murdock Lead Products Co.
National Lead Co.
do
do
do
do
do
St. Joseph Lead Co.
do
United States Smelting Refining & Mining Co.
do

OTHER ASSOCIATION MEMBERS

Harold Hertzog
R. P. E. Harnsdorf
L. V. Whiton

O. C. Wilson
A. M. Devereux
Mare S. Goldsmith
H. A. Sher
Howard Novasol

Alpha Metals, Inc.
American Metal Co. Ltd.
Consolidated Mining & Smelting Co.
of Canada Ltd.
do
Goldsmith Bros. Smelting & Refining Co.
do
do
Victory White Metal Co.

GUESTS

Paul S. Richard, M.D.
Joseph Zimmerman

Memorial Medical Center
Daily Metal Reporter



Metallie Lead Products
Division Meeting Minutes

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April 22, 1954

STAFF OF LEAD INDUSTRIES ASSOCIATION

Robert L. Ziegfeld, Secretary-Treasurer
David M. Borcina
Manfred Bouditch
Robert A. Camp
Charles E. Cherry, Jr.
Kampton H. Hall
Homer S. Yetman
Dr. L. L. Cerrick (Consultant)

The meeting convened at 3:30 P.M. with Chairman G. Howard LeFevre presiding. The Chairman called for nominations for the election of a chairman for the ensuing year, whereupon Mr. LeFevre was re-elected chairman.

The minutes of the previous meeting of April 10, 1953 were approved.

REPORT OF THE TREASURER

The report of the treasurer from January 1 to March 31, 1954 was presented and approved as Exhibit "A" attached.

REPORTS OF THE STAFF

Robert A. Camp, Homer S. Yetman, Kampton H. Hall, and David M. Borcina of the Association's staff presented reports for the past year in the Metallie Lead Products Division. (Exhibits "A," "B," "C," and "D," attached.)

Meeting adjourned at 4:45 P.M.

Robert L. Ziegfeld
Secretary.

METALLIC LEAD PRODUCTS DIVISIONFinancial StatementJanuary 1 to March 31, 1954Expenditures

Salaries	\$2,649.99
Social Security Taxes	17.67
Travel Expense	1,710.09
Mailing	9.46
PLUMBING: FURN	22.19
Association Dues	105.00
Entertainment and Luncheons	183.24
Postage	183.59
Telephone and Telegraph	78.29
Illustrations	47.22
Books and Subscriptions	17.21
Miscellaneous	120.20

Total Expenditures	\$5,144.15
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Balance, January 1, 1954	\$12,316.21
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Receipts from:

Subscriptions (Full Year)	25,823.00	
Less: Outstanding Subscriptions	<u>4,404.75</u>	21,418.75

Sale of Text Book	325.14
Sale of Reprints	<u>26.56</u>

34,006.66

Less Expenditures	5,144.15	
Advances	<u>750.00</u>	<u>5,894.15</u>

Balance, April 1, 1954	\$28,192.51
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(*) Option given to pay quarterly. On this basis \$340.75 in arrears for the first quarter.

N 3025.01

Metallie Lead Products
Division Meeting

Exhibit "A"

REPORT BY ROBERT A. CAMP

There are two phases of my activities in the past year that your chairman had asked me to discuss. These are: (1) the annual apprentice contest of the United Association (Plumbers' Union) and (2) the development of prefabricated lead plumbing with machine wiped solder joints.

ANNUAL APPRENTICE CONTEST

This apprentice contest, which is to be an annual affair, international in scope, is open to fifth year apprentices in the United States and Canada and is sponsored by the following organizations:

1. United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry.
2. National Association of Plumbing Contractors.
3. Heating, Piping & Air Conditioning Contractors National Association.

Contests will be conducted at the local level, the winners then competing at state and provincial contests and finally, state and provincial winners competing at an international contest to be held at Purdue University, August 10-12, 1954.

As you all probably know, the contest committee comprised of representative of the sponsoring organizations requested your secretary late last year to loan my services to the committee to prepare the contest rules and examinations. As a result leave of absence was granted me beginning January 1, 1954, and since that time, I have made my headquarters at the United Association's offices in Washington, D. C.

I have helped to prepare the contest rules and the written and practical examinations which will be given to all contestants. In the practical examinations, three of the ten projects given to contestants involve lead work.

The purpose of the contest is to promote better training programs at the local level and to maintain a high level of efficiency among the apprentices who will soon be journeymen members of the United Association.

This activity will undoubtedly prove beneficial to the lead industry inasmuch as the contest will encourage a more complete training program in lead work for plumbers' apprentices at the local level. The more proficient an apprentice is in lead work the more we can expect lead to be used in the plumbing system. As now constituted many training programs do not teach lead work and the incentive provided by this contest should go a long way in helping to alleviate this situation.

The text book "Lead Work for Modern Plumbing" published by this Division of L.I.A. is taking its place as part of the text book material suggested for training plumbers' apprentices.

PREFABRICATED WIPED JOINTS

The development of prefabricated lead plumbing with hand or machine wiped joints, though not entirely new, has reached the point at which companies, doing no other type of manufacturing, have been established in many sections of the country. My own experience indicates at least nine companies doing this type of work, six of them using lathe-type machines for wiping, the remaining three using special jigs and tools, but wiping by hand. As far as I have been able to determine, the machines used for wiping have been hand made by the various companies, with no two completely alike.

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Exhibit "A"

The one outstanding feature of this development is that such production methods may be a long step forward in enabling lead plumbing to compete in cost with other materials. I have been fortunate enough to inspect and test some of the products produced by these manufacturers and in all cases, they were high quality products.

One further point I would like to bring out at this time is the trend to more and more latitude being allowed by present day plumbing codes in their material requirements. It is gradually becoming almost impossible to maintain the lead requirements at the expense of other competing materials in modern plumbing codes.

Other methods of maintaining and increasing the amount of lead used in plumbing must be considered. I have just discussed two developments that will undoubtedly aid us, but we must do more educational work than we are now doing, particularly among architects and specification writers.

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Exhibit 98
April 22, 1953

REPORT BY HENRY S. KETMAN

My report last year was incomplete concerning the water service pipe situation at Gary, Ind., where a very active group, with the support of the press, were using every possible method to have the plumbing code amended to permit copper tubing as an optional material to lead.

Since that report a number of meetings were held with the Business Agent of the Plumber's Union, Plumbing Contractor's Code Committee, City Officials and officials of the Gary Hobart Water Corp.

Tests were made of the soil, which is very corrosive to most metals, and records of the excellent performance of lead water service pipe, over the years, were submitted to the City, and Water Corp. Officials.

Our objective was accomplished about Jan. 1st, 1954 when the city officials voted in favor of retaining the plumbing code section and water regulation that require all water service pipe from the main in the street to the building served to be of lead pipe in sizes from 3/4 in. to 2 in. inclusive.

The success of retaining these mandatory lead water service pipe requirements in the Gary Hobart water district has had a very good influence in the entire south shore area.

A meeting in a local plumbing supply house in Covington, Ky. to protest the lead waste requirements of the Kentucky State Plumbing Code, which makes the use of at least 6 inches of lead pipe mandatory for all plumbing waste connections, was called.

This meeting was called after the Chief State Plumbing Inspector disapproved an installation of wall hung water closets in a public building in Campbell County, Kentucky, which was in violation of the State Plumbing Code.

The plumbing contractor had violated the State Plumbing Code by installing the roughing in for these wall-hung water closets using a chair carrier that does not have a lead waste connection.

The plumbing wholesaler who called this meeting had sold the material which was disallowed.

The manufacturer of the closet chair used was deeply concerned because the chair without the lead connection was not only non-code but was a higher cost item.

The ultimate outcome of this meeting was a decision to have an amendment written and presented to the State Legislature, on Feb. 1st, 1954, which could amend the Kentucky State Plumbing Code to the effect that lead plumbing fixture waste connections would no longer be a mandatory plumbing code requirement.

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Exhibit 22
April 22, 1954

REPORT BY JAMES S. YERGAN (CONTINUED)

Just a few hours after this meeting in Covington adjourned, I was informed by phone of all that had transpired.

I immediately went to Kenton and Campbell Counties, Kentucky, and started the investigation that eventually discouraged the writing and presenting of this amendment to the State Legislature.

In order to accomplish our objective I had meetings with the Division of Sanitary Engineering in Kentucky State Department of Health, Kentucky Journeymen Plumbers' State Association, Kentucky State Plumbing Inspectors' Association, the Master Plumbers' Association of both the City of Louisville and State of Kentucky and several other influential people.

The Kentucky State Legislature adjourned March 19th this year to reconvene in February, 1956, so if another damaging amendment to the State Plumbing Code is attempted, it should take at least two years to develop.

The Kentucky State Plumbing Code has several typographical errors and other out-of date items in it.

It was recently requested by the Kentucky State Health Department that I review the State Plumbing Code and write suggested clarifications which they can recommend for adoption. This was recently completed and submitted.

At the request of a member company, the use of plastic water service pipe was investigated in Lake County, Ill. close to Neenah.

After these installations were called to the attention of the Business Agent of Plumber's Union in the locality, the plumbers and water district engineers the use of plastic pipe was stopped.

Failures of plastic pipe at Pax, W. Va. and in Montgomery County, Ohio were reported by us during the year.

These are just a few typical examples of the way we are working every day in the interest of lead plumbing and water service. We wrote suggested code amendments for three state plumbing codes and in addition, in just my territory east of the Mississippi twelve city and county codes. We met with code committees in ten cities and three states. We also met with three city, six state and one regional plumbers apprenticeship committees.

Further, we participated in also state plumbers meetings, two meetings of the National Plumbing Coordinating Committee, a meeting of the Building Research Advisory Board, and the annual meeting of the American Society of Sanitary Engineering. At the request of members thirteen investigations of failures were conducted.

During the past year we have had four very interesting plumbing exhibits.

In May, at Kansas City, Mo. for the National Association of Plumbing Contractors we had a very interesting exhibit. The lead wiping bench we had in operation was one of the largest crowd attractions in the exhibit hall.

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Exhibit "B"
April 22, 1954

REPORT BY HOMER S. YETMAN (CONTINUED)

In September we prepared a lead exhibit for the Chicago Journeymen Plumber's Annual Fall Educational Conference. This exhibit attracted much attention from both the plumbers and the public. Lead service pipe, lead water closet waste connection, lead shower pans, and lead vent pipe flashings were featured.

In November we prepared an educational exhibit concerning lead work training for Plumbers Apprentices for the New York State Apprenticeship Council held in St. George Hotel in Brooklyn. This was well patronized.

In January of this year we were requested to build and show a lead plumbing exhibit at the International Apprenticeship Conference sponsored by the United Association of Journeymen Plumbers and Steamfitters held in Shoreham Hotel in Washington, D. C.

Union Officials and plumbing apprenticeship directors from every state and Canadian province were in attendance.

More interest was shown in our exhibits by those in attendance at this conference, than I have ever witnessed at any previous exhibit of this kind.

Respectfully submitted,

Homer S. Yetman

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Exhibit "C"
April 22, 1954

REPORT BY KAMPTON R. ROLL

Following is an outline report on the activities of Kampton R. Roll on behalf of the Metallic Lead Products Division covering the period April, 1953, to April, 1954.

Broadly, our activities covered two fields: the exploration and development of (1) the use of lead in radiation shielding, and (2) the use of lead as a material of chemical construction.

1. Lead in Radiation Shielding

There has been increased interest in the use of radioactive materials, including radioisotopes, gamma emitters for industrial radiography and atomic energy utilization. It was felt desirable to determine, from sources as reliable as possible, what influence the atomic energy program and developments along these lines have exerted and will exert on the market for lead. In addition, it was decided that while lead is more or less universally recognized as a standard shielding material, it would not be amiss to assemble reliable data and present it to the users of shielding materials in order to retain lead's favorable position. Efforts by the suppliers of competitive material such as marble and tungsten alloy metals have been attempting to gain a foothold in this field. With this in mind, we set out to prepare a manuscript entitled "Lead Shielding and Radioisotopes" for possible publication in "Nucleonics" and other magazines reaching the users of these materials. The manuscript was based on interviews with atomic energy commission personnel, with lead shielding equipment suppliers and with some of the member companies.

A paper on the subject of lead shielding and atomic power is also being considered for possible preparation by an authority in the field or, depending upon the outlook, by the Association. However, the whole matter of lead in radiation shielding has become complicated by the fact that at higher energy levels lead appears to lose its competitive advantages over steel or concrete. At the lower energy levels, where radioisotopes and X-ray shielding are involved, lead has considerable advantage. M.L.P.D. Bulletin No. 60 entitled "Tungsten Alloy Substitute for Lead Shielding" was released on December 11, 1953, to acquaint members with the shortcomings of tungsten alloy materials that were being promoted for use in radiation shielding. Our efforts are continuing to produce something authoritative that will also redound to the benefit of lead.

2. Lead in Chemical Construction

Our program to revive and continue the interest in lead as a modern metal of chemical construction is progressing. The program is based principally on publication of articles in leading magazines reaching this field in which we attempt to show why and where lead is being used and why it should continue to be regarded as a modern means of combatting corrosion. Since April of last year we have released to the members the following Chemical Bulletins whose titles are self-explanatory.

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Division Meeting

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Exhibit "C"
April 22, 1954

REPORT BY KEMPTON H. ROLL (CONTINUED)

<u>No.</u>	<u>Title</u>
51	Evaluation of Construction Materials
52	Lead and Lead Alloys
53	Flow Sheet Reprint from "Chemical Engineering"
54	New Tool Speeds Lead Lining Erection
55	Materials of Chemical Construction Annual Review
56	Erection of Lead Linings with Stud Driver

During the same period we distributed the following Lead Chemical Construction Bulletins to a select list of professors of chemical engineering, engineers in the field, lead burning contractors and chemical construction consultants. This list totals approximately 1250.

<u>No.</u>	<u>Title</u>
7	Lead and Lead Alloys
8	Flow Sheet Reprint from "Chemical Engineering"
9	Materials of Chemical Construction Annual Review
10	Erection of Lead Linings with Stud Driver

Correspondence from chemical companies, etc., has shown that these Lead Chemical Construction Bulletins are of definite use and, in many cases, of value, to the recipient. Since initiating the bulletins we are continually receiving requests for complete sets of the series.

It has been our belief that if we could show chemical engineers and users of corrosion resistant equipment that lead has many advantages in addition to its superior corrosion resistance we could show that its use should be considered. The entire industry could benefit from a display of evidence that the lead manufacturers and suppliers are alert and represent an aggressively-minded industry. This is particularly important in our opinion when one considers the highly aggressive methods employed by stainless steel manufacturers, the plastics industry, protective coatings producers, etc.

With this in mind, the Association initiated a cost-free cooperative investigation of the possibilities of a new tool for use in the erection of lead linings. The tool is manufactured by the Remington Arms Company. Results of the program showed that substantial cost savings could be realized through the use of this tool in the construction of sheet lead lined and strapped steel or concrete vessels. This was described in Chemical Bulletin No. 54. An illustrated story describing this tool and development was published in the following magazines: Chemical Engineering, Petroleum Refiner, Design News, Steel, Mill & Factory. Reprints of the "Chemical Engineering" article were sent to the members as Chemical Bulletin No. 56 and to our lead chemical construction mailing list as Lead Chemical Construction Bulletin No. 10.

Metallic Lead Products
Division Meeting

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Exhibit "C"
April 22, 1954

REPORT BY KEMPTON E. ROLL (CONTINUED)

The following member companies have from time to time ordered reprints of the articles on lead chemical construction prepared by the Association for distribution to their own salesmen and customers: National Lead Company, Knapp Mills, Inc., Federated Metals Division, American Smelting & Refining Company. These are supplied at cost and, in many cases, are imprinted with the company's name. Because of the quantities involved they can be obtained at much less expense than when ordered individually from the magazines.

Continuing our past policy, we lectured before some two hundred graduate engineering students at the Newark College of Engineering on the subject of lead as an engineering material. We are prepared to deliver similar lectures before any group requesting this service.

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Exhibit "D"
April 22, 1954

REPORT BY DAVID M. BORCINA

Since my report to you on the initial success of the plumbers' text book "Lead Work for Modern Plumbing" at the meeting a year ago, we received authorization from the Division to print an additional 3,000 copies. These were delivered in June, 1953, and to date 1,700 copies of this second printing have been sold at \$1.00 per copy where quantities of 10 or more were ordered and at \$1.50 per copy when less than 10 were ordered.

We were a little apprehensive about setting these prices on the book when it was originally offered to the plumbing trade but the overwhelming response indicated a positive need for such "How To" books among the craft trades such as the plumbers.

An interesting aspect of this undertaking is the fact that the Division will have distributed almost \$5,000.00 worth of semi-promotional books at a net cost to the Division of less than \$2,000.00 when the remaining 1,300 copies are sold. Orders in quantity are still being received almost daily.

It should be pointed out that more than half the books have been purchased for use in journeymen and apprentice training classes from which we can expect multiple readership. The Plumbers' Union Local in Chicago alone have purchased 500 copies.

Also, we have been notified recently that "Lead Work for Modern Plumbing" was approved by the Board of Education of the City of New York for use as a text book in day and evening vocational high schools.

All of this has been accomplished without any special selling campaign or mailings. We feel quite confident that the continued demand for the book can be attributed to word of mouth advertising, our own field men's activities and the listing in the Available Literature section of our own Plumbers' Forum.

If the current rate of demand continues as expected the present supply will be exhausted sometime this Fall. The Division might well consider, at this time, the advisability of approving a third printing.

The Division is also engaged in the preparation of a soldering handbook that was undertaken at the request of the Committee on Brazing and Soldering of the American Welding Society. A subcommittee to handle this project was formed and is composed of representatives of member companies as follows:

M.C. Sohl
L.V. Feldman
R.A. Gardiner, Jr.
E.J. Minarcik

American Smelting & Refining Co.
Division Lead Co.
Gardiner Metal Co.
National Lead Co.

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Exhibit "D"
April 22, 1954

As secretary and chairman of this sub-committee, I am most appreciative of the cooperative efforts of this group. The work is moving slowly, but steadily.

Sections that have already been prepared and reviewed by the Committee are as follows:

1. Composition of Solder
2. Uses of Soft Solder
3. Effects of Impurities Upon the Performance of Solders
4. Methods of Soldering
5. Principles of Soft Soldering
6. Discussion of the Lead-Tin System
7. Design of the Soldered Joint
8. Precleaning and Surface Preparation
9. Soft Soldering Fluxes

As a result of discussions at the last meeting of the Sub-Committee, the first four sections listed required extensive revisions and work on them is now underway.

In addition, sections on the soldering of steel and copper have been assigned. It was the opinion of the sub-committee that work on the soldering of the other metals be held in abeyance until such time as the copper and steel sections are prepared. It was felt that soldering these two metals accounted for the bulk of solder used today and that a format satisfactory to the treatment of both these metals should be given first consideration and applied to the other less commonly soldered metals to be covered.