

LEAD INDUSTRIES ASSOCIATION

480 LEONISTON AVENUE

NEW YORK 17, N. Y. October 17, 1949

RED LEAD DIVISION

SUBJECT: PROGRESS REPORT, 1949
AND RECOMMENDED PROGRAM, 1950

To Members of the Red Lead Division:

I am pleased to attach a Progress Report on the activities of the Red Lead Division for the year 1949 to date, (pages 1 to 9) together with a tentative recommended program (pages 10 to 12) and budget (page 13) for 1950 which has been reviewed and approved by the Red Lead Technical Committee. Financial statement for the current year to date (page 6) is also attached.

Summaries of the report and recommended program will be found on pages 5 and 12 respectively.

It will be seen that expenditures for the current year will probably run about \$2000 less than the approved budget of \$23,000. This is largely due to the fact that two items, traveling expense and research materials and expense, ran considerably less than estimated. As a result the Division should end the year with a cash balance of between \$3000 and \$4000, most of which might be applied to next year's budget.

We have estimated that the suggested program for 1950 will cost about \$23,000, which is the same amount that was approved for 1949 but a substantial part of the cash balance remaining at the year-end might be applied to the 1950 activities and, therefore, reduce the subscriptions of members from \$23,000 subscribed this year to about \$21,000. This would be a reduction of approximately 10% in total subscriptions.

It is our firm belief that the red lead program is a remarkable example of what can be accomplished through soundly conceived, cooperative effort. It is beginning to show results of the ground work of research laid in the past five years. These results are multiplied as time goes on.

Would you please let me know whether you approve of the suggested program for next year or whether you would prefer to have a meeting of the Division called so that it can be discussed in detail by all members? An early reply will be appreciated so that a budget having the Division's approval may be submitted to the Executive Committee of the Lead Industries Association at its next meeting.

Very truly yours,

Robert L. Ziegler
Secretary



RED LEAD DIVISIONPROGRESS REPORTJanuary 1 to September 30, 1949

During the period covered by this report, practically all activities were of a promotional nature, based largely on results of research projects started in earlier years. Research activities were in the main confined to continuation, inspection and evaluation of projects already under way.

ATMOSPHERIC EXPOSURE PROGRAM

On September 15, 1949, the 95 corrosion inhibitive paints on 1,410 specimens at five locations, which comprise this test, had been exposed for one year. They were all inspected at that time by members of the Red Lead Technical Committee and the technical director of the Division. This early inspection already shows a general superiority of the red lead base paints over those based on other corrosion inhibitive pigments.

A brochure describing this project in detail has been prepared and is now in galley proof form. It will be circulated in the next few weeks to between 10,000 and 15,000 users, specifiers and manufacturers of corrosion inhibitive paints.

It will be followed before the year end by a first progress report giving the results of the inspections made this fall after one year's exposure.

RED LEAD TECHNICAL LETTERS

Red Lead Technical Letter No. 3, which was published by this Division late in 1948, resulted in a large amount of interesting correspondence in early 1949. Several hundred requests were received for additional copies and there were many requests for further recommendations on the application of red lead paints to specific problems. Samples of some of the inquiries are attached to give an idea of their type. See Appendix, pages 7 to 9, attached.

In September, 1949, Red Lead Technical Letter No. 4 was printed and circulated. The mailing list for these letters contains about 8,000 names. This letter gave twelve red lead base formulations for the three general types of marine exposure-atmospheric, intermittent immersion or tide range, and continuous immersion. The recommen-

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dations were based on a complete inspection of all earlier tests by the Technical Committee and director at Sayville, L.I., N.Y., in April, 1949. It also contained the new Government specification red lead formulations and new Navy red lead paint for top side maintenance mentioned later in this report. Requests for more than one hundred additional copies of this Letter have been received in the four weeks since its issuance. One request for copies was for use in the graduate course on paint technology at Brooklyn Polytechnic Institute.

GOVERNMENT SPECIFICATIONS

The work of the Technical Committee with the Federal Specifications Board, which had been going on for more than a year, finally culminated in publication by the Government of a new specification, TT-P-86a, covering four types of red lead base paints for Government use. These range from 65 to 100 per cent red lead content and are substantially in accordance with the recommendations made by the Committee.

U. S. NAVY SPECIFICATIONS

One of the earliest objectives of this Division was to recapture the metal protective paint market of the Navy which was lost to zinc chromate at the beginning of the war. An important step toward attainment of that objective was taken during the year. The Navy, because of considerable dissatisfaction with the zinc chromate paints it has been using, issued "Bureau of Ships Formula No. 116, Primer, Exterior, Maintenance (For Weather Surfaces)." This paint contains 55 per cent red lead and is similar in composition to U.S. Maritime Commission Specification 52-MC-201, adopted a few years ago on the recommendation of our Technical Committee. This appears to be clear cut evidence of the value of this Division's cooperative work. Tens of thousands of gallons of this paint, containing 3.8 lb. of red lead per gallon, have already been ordered by the Navy in the short time since adoption of the formula, whereas no red lead was contained in the predecessor formula.

PUBLISHED REPORTS AND ARTICLES

A paper entitled "An Investigation of Primers for Marine Atmospheric Environments" was presented by the technical director of the Division before the Baltimore Paint and Varnish Production Club. It was the same paper that was presented at Houston and Dallas late in 1949 and was based on tests started by the Division some four years earlier. This paper was subsequently published in the May, 1949, issue of the "Official Digest" of the Federation of Paint and Varnish Production Clubs. Approximately 7,000 reprints were mailed to specifiers, users and formulators of metal protective paints.

COOPERATIVE PROJECT AT THE PANAMA CANAL

Several paint systems containing red lead primers were exposed during the year as part of a long range project being carried out by the Special Engineering Division of the U. S. Army to develop improved paint systems for the maintenance of all installations on the Panama Canal and for the proposed new Panama Isthmus Waterway. Complete application and formulation data and the necessary quantities of paint were submitted for five systems for atmospheric, sea-water and fresh-water exposures.

GAS HOLDER PROJECT

A project for painting water-seal type gas holders was initiated during the year. Paint systems have been selected by the Red Lead Committee for submission to cooperators. The Cincinnati Gas Company has offered to cooperate in this project by applying test strips to their gas holders. Additional cooperators are now being solicited through the cooperation of the American Gas Association.

INSPECTION OF PROJECTS

All the paint projects at Sayville, both atmospheric and marine, were subjected to a complete inspection by the Red Lead Technical Committee and the technical director on April 7 and 8. The results of this inspection were utilized in preparing Red Lead Technical Letter No. 4 and in selecting the best paints for the Gas Holder Project.

The first annual inspections on the Lead Industries Association Atmospheric Project have been completed at all five sites. It is planned to publish these results in the first progress report before the close of the year.

The spring inspection and another inspection made in September yielded considerable data that should prove valuable for technical papers, promotional articles and in answering inquiries from the field.

FIELD WORK

Many contacts were made and followed up during the year through personal calls and at conventions. Among these contacts were included federal, state and city agencies and manufacturers. Inquiries received as a result of the published literature mentioned in this report, also led to a number of personal follow-ups.

SUMMARY

The 1949 activities to date may be summarized briefly as follows:

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1. The 1,410 test specimens in the Atmospheric Exposure Program initiated in 1943 were inspected after one year exposure at all five test sites.
2. A brochure describing this project was prepared and will be circulated to 10,000 or 15,000 red lead prospects in a few weeks.
3. A first progress report on this project based on the one-year inspection is being prepared for mailing before the year end.
4. Red Lead Technical Letter No. 4 was issued and mailed to about 8,000 people. It resulted in many inquiries, as did Letter No. 3 which preceded it.
5. Federal Specification TT-P-88a, covering four types of red lead paint, was issued by the Government after cooperation by our Technical Committee in its preparation.
6. The U. S. Navy issued Formula No. 116, a red lead base paint similar to one recommended by the Association, to replace a paint containing no red lead previously used for maintenance above the water line.
7. A paper on red lead primers was delivered before the Baltimore Paint and Varnish Production Club, printed in the "Official Digest," and about 7,000 reprints circulated.
8. An article "New Marine Primers" was prepared and printed in "Marine Engineering." About 5,000 reprints were circulated.
9. About 15,000 copies of a report of an investigation of metal primers at Battelle Institute, sponsored by the American Iron and Steel Institute and very favorable to red lead, were circulated.
10. A condensation of the above report was prepared and accepted for early publication in "Iron Age."
11. Two cooperative research projects on metal protective primers were started with the U.S. Navy.
12. A cooperative research project with the Special Engineering Division of the U.S. Army was started on paints for Panama Canal Zone installations.
13. A project for painting gas holders was initiated.
14. Considerable field work was conducted, much as a result of inquiries received from literature mailed.

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RED LEAD DIVISIONFinancial StatementJanuary 1 to September 30, 1949

	<u>Expenditures</u>	
Consulting Fees	\$ 360.00	
Salaries	6,389.06	
Social Security Taxes	37.40	
Travel Expense	1,179.57	
Telephone and Telegraph	191.50	
Meetings	300.46	
Entertainment and Luncheons	251.38	
Printing	2,428.25	
Illustrations	260.17	
Research Material	77.80	
Books and Subscriptions	50.71	
Association Dues	49.00	
Miscellaneous	163.30	
Mailing	<u>1,577.03</u>	
Total Expenditures	\$13,337.53	
Balance, January 1, 1949		\$ 1,279.76
Subscriptions (Three Quarters)		<u>17,440.25</u>
		\$18,720.01
Less: Expenditures	\$13,337.53	
Advance	<u>400.00</u>	<u>13,727.52</u>
Cash Balance, October 1, 1949		4,982.48
Reserve for Printing		4,500.00
Reserve for Mailing		<u>800.00</u>
Total Balance, October 1, 1949		\$10,282.48

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APPENDIXSAMPLES OF INQUIRIES

From: J. L. Cripple, Benolite Dept., Westinghouse Electric Corp.,
Manor, Pa., August 8, 1949.

"I have in my files a copy of Red Lead Technical Letter #3, October, 1948. I would greatly appreciate your forwarding to me Technical Letters No. 1 and 2, and any others issued subsequent to #3, if available.

"Would you also place my name on your mailing list to receive future publications?

"I am engaged in development work on pigmented finishes. One of my present problems is the development of a primer for Marine Atmospheric Environments. I have studied the paper by Mr. C. J. Vander Valk which appeared in the 'Official Digest,' for May, 1949, and have found it exceedingly helpful.

"I would like you to tell me why a formulation based on a phenolic varnish as the only vehicle was not tried. If a vehicle of that type would give good results, please let me know which types of resin, oil, and what range of oil lengths would be required."

From: John W. Kee, Napko Paint & Varnish Works, Houston 11, Tex.,
February 22, 1949.

"We are in receipt of your recent release on Red Lead Primers for atmospheric exposure and desire more information.

"We want your best recommendation, pigment and vehicle wise, for what you have found to be best red lead primer for steel storage tanks along the sea coast area, from one to twenty-five miles from salt water.

"Also your best experience on marine primers for use in salt water on boats, barges and stationary steel objects. We want to know what experience you have had both in tidal range and totally submerged.

"We are quite anxious to submit some specifications and would appreciate a prompt answer."

From: Fred W. Ducky, Jr., Kemp, Bunch & Jackson, Architects, Jacksonville, Fla., February 7, 1949.

"What formula do you recommend for shop coat of structural steel in buildings (1) where steel will be encased in concrete or masonry fireproofing (as columns); (2) where steel will be available for inspection and maintenance (as roof trusses)?"

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APPENDIX (Continued)

SAMPLES OF INQUIRIES

From: Frank Van Gilder, Director, Camden School of Trades, Camden 2, N.J., May 26, 1949.

"We here at the Camden School of Trades have over 200 students pursuing a course of study in Painting and Decorating. Part of the curricula is devoted to lead and the part it plays in the paint industry.

"Any literature or material that you think we might be able to use as visual aids and that you have available will assist us greatly in reaching our objectives."

From: A. A. Petersen, Chief Engineer, Prat-Daniel Corp., Port Chester, N.Y., March 17, 1949.

"We appreciate receipt of two copies of the Association's Red Lead Technical Letter No. 3 which I am sure will be of value in protecting our products.

"However, I wonder if the Association is in a position to give us additional information or advice on the question of the base formula for red lead protection for a combination against corrosion and temperature. In other words, as manufacturers of induced draft fan stack equipment, we must have suitable protection against corrosion resulting from normal atmospheric conditions before installation and a paint protection that will withstand temperatures as high as 800-900°F. maximum.

"Your help and advice will be much appreciated."

From: Thomas B. Grover, Corrosite Corp., New York 17, N.Y., February 7, 1949.

"Just a brief note to express my appreciation for your most helpful information last Thursday. I am most interested to learn that your formulation 3-8 possesses characteristics that may well be compatible with Corrosite coatings.

"Our need for a compatible red lead primer arises out of the many jobs where red lead is specified in conjunction with our Corrosite. We have in the past consistently had applications where Corrosite has shown outstanding results when applied over red lead that had weathered previously for five or six months. This prolonged weathering period has prevented us in the past from using red lead in many instances and therefore, we are most desirous to obtain a red lead primer that Corrosite can successfully be applied over within a matter of days. (Ordinarily Corrosite is applied directly to a surface without the assistance of a primer.)

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APPENDIX
(Continued)SAMPLES OF INQUIRIES

Letter from Thomas B. Grove continued.

"The wide variety of chemical resistances available in the new plastic coatings is rapidly displacing such materials as asphalt coatings; and when we find that a compatible, quick-curing, red lead primer will further enhance the value of our Corrosite, we will most certainly be interested.

"To cite an example, we are to supply the coating for approximately 150 industrial water cooler tanks this spring. Past applications have proved our Corrosite to be excellent for this purpose when applied directly to the steel. However, as an added safety factor the Engineering Department of this company has specified red lead as a primer. Presently we know of no red lead that may be used on this job because of the necessity of applying the Corrosite to the primer within a week or so after application.

"Any time in the future that you learn of new red lead formulations that you think may be compatible with Corrosite and advantageous, we will certainly appreciate your passing this information along to us. In the event you personally should desire any samples of our material for testing in your laboratory, please call me personally, and I will see that they are delivered to you immediately."

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RED LEAD DIVISIONRECOMMENDED PROGRAM FOR 1950GENERAL

It is felt that the emphasis of the work of this Division should again be placed on promotion rather than research in 1950, as was done in 1949. In this way full advantage can be taken of the research programs started, and in some cases concluded, in recent years. It is felt, however, that new developments may make advisable a limited amount of additional research to keep our recommendations and promotional material up to date and to provide data for promotional work in future years. Therefore, a limited amount of research is included in the Recommended Program for 1950.

PUBLICITY FOR ATMOSPHERIC
EXPOSURE PROGRAM

The first report of this program, describing it in detail, and the first progress report rating the specimens after one year's exposure, will have been published and circulated to some 10,000 or 15,000 people by the end of 1949. It is felt that at least one additional progress report should be issued during 1950. While frequent reports may not show much difference in the ratings on many of the panels at this early stage of the project, they seem advisable for the purpose of bringing the project before the people we wish to interest.

It also seems advisable during 1950 to prepare a paper describing, in detail, the atmospheric exposure program and giving preliminary reports of results for delivery before some Paint and Varnish Production Clubs during 1950, followed in later years by papers bringing the preliminary data up to date.

RED LEAD TECHNICAL LETTERS

The Red Lead Technical Letters issued by the Association have received broad and favorable acceptance and have resulted in the adoption of suggested formulas in a number of cases known to us. It is felt that there will be sufficient data available to issue two more Technical Letters during 1950. These will be circulated, as in the past, to between 10,000 and 15,000 manufacturers, users and specifiers of metal protective paints. Publicizing these Technical Letters in the trade press has also brought many inquiries which have added valuable names to our mailing list and such publicity should be continued for future Technical Letters.

PRIMERS FOR GALVANIZED IRON

Last year it was suggested that a number of articles might be prepared on the Association's project on primers for galvanized iron, for publication in farm papers, factory maintenance papers, sheet metal

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trade papers, and building construction papers, and that reprints could be used for Association distribution. This work was not consummated in 1949 and it is suggested that it be included in the 1950 program. Likewise, it was suggested a year ago that this work, at a somewhat later date, would lend itself to preparation of a paper before Paint and Varnish Production Clubs, subsequently to be published in the "Official Digest," reprints to be used by the Association and its members. This also should be a part of the 1950 activities.

VEHICLES FOR USE WITH RED LEAD MIXED PIGMENT FORMULATIONS

It was also suggested a year ago that an early research project of the Association on suitable vehicles for use with red lead mixed pigment formulations would yield data suitable for the preparation of a paper on this subject. As this has not yet been done, it should be included in the 1950 activities.

PAPER ON METAL PROTECTIVE PAINTS NATIONAL ASSOCIATION OF CORROSION ENGINEERS

At the annual meeting of the National Association of Corrosion Engineers in April, 1949, a paper on Metal Protective Primers was delivered by Mr. S. C. Frye of the Bethlehem Steel Corp. This paper turned out to be excellent promotional material for red lead. It has not as yet been published in "Corrosion," the official publication of the N.A.C.E. When this paper appears in print, reprints should be obtained by the Association and circulated to our mailing list of between 10,000 and 15,000 interested people.

RESEARCH

It is felt that because of new developments in vehicles it might be wise to initiate a limited program of study of vehicles for use with mixed pigment red lead paints, to carry on where earlier similar projects of the Association left off. Results of such a program could be the basis for promotional work in later years.

FIELD WORK

A larger amount of field work should be included in the 1950 activities. It will be necessary to keep close contact with the Navy's cooperative test programs on metal protective paints and also to bring the information developed in such tests, and in our own tests, before Government agencies and large industrial users and specifiers of paint and paint manufacturers.

A larger amount of time in the field will also be required to make inspections of the L.I.A. atmospheric exposure program.

SUMMARY

The foregoing recommended program for the Red Lead Division for 1950 can be summarized as follows:

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1. Publication of the second progress report of the atmospheric exposure program initiated in 1948, with related publicity releases.

2. Preparation of a paper for delivery before Paint and Varnish Production Clubs describing the atmospheric program and giving some preliminary results.

3. Publication of two Red Lead Technical Letters.

4. Preparation of a paper for delivery before Paint and Varnish Production Clubs on paints for galvanized iron, and preparation of articles on the same subject for publication in suitable specialized papers.

5. Preparation of a paper on an earlier Association project on vehicles for use in red lead mixed pigment formulations.

6. Printing and circulation of reprints of the paper by Mr. S. C. Frye delivered at the 1949 annual meeting of the National Association of Corrosion Engineers, and other similar papers which may become available during the year.

7. Initiation of a new modest research program on vehicles for use with red lead mixed pigment paints, to include recent vehicle developments and continue the work of an earlier Association project on this subject.

8. Maintain close contact with the Navy's cooperative test programs on red lead paints.

9. Field work to bring the information developed by the Red Lead Technical Committee before Government agencies and large industrial users and specifiers of red lead paint, as well as paint manufacturers.

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RECOMMENDED BUDGET, 1950

<u>Expenditures</u>	<u>Estimated 1949 TOTAL</u>	<u>Recommended 1950</u>
Salaries and Consulting Fees	\$9,800	\$9,700
Social Security Taxes	85	100
Traveling Expense	2,000	3,000
Telephone and Telegraph	300	300
Meetings	400	400
Entertainment and Luncheons	400	500
Printing	\$10,000	
Less: Reserve for Printing	<u>4,500</u>	
	5,500	5,000
Mailing	\$ 2,700	
Less: Reserve for Mailing	<u>800</u>	
	1,900	1,500
Illustrations	350	400
Research Materials and Expense	200	1,000
Books and Subscriptions	65	100
Association Dues	100	100
Miscellaneous	350	400
Contingencies	-	500
Total Expenditures	\$20,850	\$23,000
 <u>Receipts</u>		
Carried over from previous year	\$1,279.76	\$3,430
Subscriptions from members	<u>23,000.00</u>	<u>21,000</u>
Total Available	\$24,279.76	\$24,430
Less: Expenditures	<u>20,850.00</u>	<u>23,000</u>
Carried forward to next year	\$3,429.76	\$1,430