

LEAD INDUSTRIES ASSOCIATION

480 LEXINGTON AVENUE

NEW YORK 17, N. Y.

SUBJECT TO REVISION

CONFIDENTIAL

RED LEAD DIVISION

New York, N.Y.

April 14, 1944.

A meeting of the members of the Red Lead Division was held at the office of the Lead Industries Association, New York, N.Y. on April 14, 1944, at 10:45 A.M.

Present

A.C. Goets
M.M. Zeller
O. Shobe
J.C. Johnstone
J.W. Gardiner
A.J. Eickhoff
R.L. Hallett
D.A. Morsom
H. Rowe
A. Stewart
E.V. Peters
H.R. Taylor

Representing

Eagle-Fisher Sales Co.
Eagle-Fisher Sales Co.
The Glidden Co.
Hammond Lead Products Inc.
John T. Lewis & Bros. Co.
National Lead Co.
National Lead Co.
National Lead Co.
National Lead Co.
National Lead Co.
St. Joseph Lead Co.
United States Smelting Refining
& Mining Co. Inc.

F.E. Wornser, Secretary
R.L. Ziegfeld, Assistant Secretary
L.L. Carrick, Director, Red Lead Research

The meeting was called to order with the Secretary in the chair.

REPORT OF THE CHAIRMAN

Our Red Lead Division program was carried on for part of 1943 with Dr. L.L. Carrick acting as a consultant while he was still Dean of the School of Chemical Technology at the North Dakota Agricultural College. As Dr. Carrick did not assume full time employment with the Association until October 1, 1943 the program only received his undivided time after that date.

A large amount of attention was given to persuade the U.S. Maritime Commission to continue its preference for red lead as a priming coat on steel. Although several high officials favor the continued use of red lead, the Admiral in charge, purely for the sake of expediency, and with apparently a high regard for Navy painting issued a directive on April 8, 1944 (Exhibit "X" attached)



Red Lead Division
Meeting Minutes

- 2 -

April 14, 1944

permitting zinc chromate as an alternate for red lead paint. Our industry is in a precarious position in the government marine field so long as the Navy continues to use only one competitive metal protective priming coat.

Unfortunately it takes a long time to test various recommended marine paint formulations and we must expect a period during which we may lose ground before we can recapture our former markets. As I see it, our problem is to furnish a paint for maritime application lower in cost than anything now currently being used and more durable than competitive products in the same price range. I have no doubt but what this can be done.

One of the reasons why red lead was threatened to be displaced from the Maritime Commission was because of toxicity. This objection has been successfully overcome and our industry need now have no fear of not being able to meet the issue squarely wherever the argument may arise.

There are some 400 commercial shipyards in the United States and if we are to capitalize the good-will we now have in favor of red lead in many of these yards, some attention should be given to promotional work in the marine field, either by our individual member companies or through the Association.

We must not lose sight of the large field in which the use of red lead is now favored to the virtual exclusion of almost all other metal priming paints. I refer, of course, to the construction industry, to highways, steel buildings, railways and bridges. We have a sizeable task to hold and increase these markets in the face of competition and it seems to me that now, while we still hold these markets, is the time for us to plan intelligently as to what we may do individually, and collectively in the interests of red lead.

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The chairman exhibited an article appearing in the April 6 issue of ENGINEERING NEWS-RECORD, by Dr. Carrick on "Red Lead for Structural Work", as a step toward capturing, or protecting these other markets. The members were asked to notify the Association as soon as possible if they would like reprints of the ENGINEERING NEWS-RECORD article.

REPORT OF DR. CARRICK

Dr. Carrick then reviewed the research program briefly to date. An outline of his review is attached as Exhibit "B".

The meeting then proceeded to consider a number of policy matters, as follows:

CONDUCT OF RESEARCH PROGRAM

It was pointed out that the research so far done by the cooperating company laboratories in getting the program started was to be highly commended, but because the laboratories were so short-handed, not as much work could be done as had been hoped, nor could it be accomplished as rapidly as if done in one laboratory. It was generally felt that the best procedure under present conditions would be to lay out a program of research and allot various portions of it to the cooperating laboratories. It was felt that the work done so far had demonstrated, particularly with respect to mixed pigmentations on marine application, that the industry had a competitor in red lead which fully justified more work by our industry.

Red Lead Division
Meeting Minutes

- 3 -

April 14, 1944

DISTRIBUTION OF INTERIM RESEARCH REPORTS

It was decided that interim technical reports should be marked "confidential" and that their distribution should be confined only to those laboratories actually participating in the research work, so as to prevent premature disclosure and misinterpretation of results. Final reports of all research projects, however, were to be distributed to all supporting companies.

It was agreed that dissemination of the technical reports to the general public would depend upon the nature of the report and the results of the work.

EXTENT OF RESEARCH PROGRAM

It was definitely felt that this should be a long range program designed to maintain and re-establish red lead in all competitive fields, based upon technical data.

SCOPE OF MARKET

The Red Lead Division had already established relations with the U. S. Maritime Commission, Navy, Public Roads, Railways, Chicago Subway, U.S. Engineers in charge of the Upper Mississippi Dams and private shipyards and had begun to study its markets intensively.

It was decided that it would be extremely valuable for the Association to summarize market information regarding various current and potential users of red lead and to provide these data periodically to members. This would be a valuable guide in directing the efforts of the Division and in assisting the members. It was brought out here that work would have to be done especially with the Navy in marine work and that many private shipyards, themselves, are highly favorable to the use of red lead.

TOXICITY OF ZINC CHROMATE AND RED LEAD

The Chairman pointed out that toxicity no longer seemed to be a factor so far as the Maritime Commission is concerned, and that he was investigating the attitude of others on the ground that the choice of a paint should be decided purely on technical grounds. The Chairman pointed out here that he had been criticised for mentioning the toxicity of zinc chromate but stated that this had only been done when placed on the defensive about the toxicity of red lead by people who believed, mistakenly, that zinc chromate was non-toxic. He asked the guidance of the members as to whether he should continue to pursue this policy or whether nothing should be said about the toxicity of competitive products.

It was felt that it is undesirable to mention toxicity of any product, but that defensive measures were proper if the claim is made that zinc chromate is non-toxic or less toxic than red lead. It was suggested that an effort might be made to prevail upon the zinc chromate manufacturers to drop entirely the subject of toxicity of red lead.

Red Lead Division
Meeting Minutes

April 16, 1944

The Chairman was instructed to prepare a scientific statement on the hazards of using red lead and zinc chromate, to be provided to members for use for defensive purposes only.

It was also felt that a program of education is necessary to allay fears about toxicity since nearly every one believes in the danger of using lead, which has been given wide publicity for years, and since very few believe in the danger of using zinc chromate, a newer compound.

It was also suggested that a broad study of the whole toxicity problem with respect to all paints be made by some such impartial organization as the Mellon Institute. Such a program would probably cost in the neighborhood of \$20,000 a year. No action was taken on this suggestion.

FINANCIAL STATEMENTS

Statements of the 1943 and 1944 expenses and receipts to date of this Division, attached as Exhibits "C" and "D" respectively, were presented and approved.

BUDGET FOR 1944

The proposed budget for 1944, attached as Exhibit "E" was also presented. It was regularly moved, seconded and carried that this budget be adopted. It was pointed out, however, that since we had had no experience as to what the various activities might cost reconsideration might be necessary of various items in the budget. It was further agreed that manufacturers would subscribe 80 per cent of the total funds on a tonnage basis, using the amount of red lead used in paint in 1943 in calculating the 1944 subscriptions.

The meeting adjourned at 12:25 P.M.

H. Johnson
Secretary.

Red Lead Division
Meeting Minutes

C O P Y

Exhibit "A"
April 14, 1944

UNITED STATES MARITIME COMMISSION
Washington 25, D.C.
April 8, 1944

All Regional Directors of Construction
United States Maritime Commission

Gentlemen:

Subject: Paint Primers - PAINTING

- Reference: (a) USMC Specification 62-MC-29, Primer, Zinc Chromate
(b) USMC Specification 62-MC-23, Primer, Red Lead, Quick Drying (Synthetic)
(c) USMC Specification 62-MC-18, Primer, Red Lead, Modified
(d) Conservation Order #2 dated January 22, 1944

Effective immediately, the use of either zinc chromate primer, conforming to reference (a), or red lead primers, references (b) and (c), shall be optional for the general priming of steel surfaces of vessels under construction to the account of the Commission, where red lead primer has been specified. The choice of either type of primer will depend upon local conditions and availability of supply.

Owing to the critical status of zinc chromate, it may not be possible to obtain sufficient quantities of zinc chromate primer on short notice, in certain areas. It is requested, therefore, that careful inquiries be made by shipyards under your jurisdiction, in order to ascertain the ability of their paint suppliers to furnish material conforming to the requirements of reference (a), zinc chromate primer, in sufficient quantities to meet their demands.

As materials conforming to reference (b) contain phthalic alkyd resin, an extremely critical material, all red lead primer on hand at the shipyards and all red lead primer which will be received on contracts or purchase orders which can not be cancelled, should be used before any conversion to zinc chromate primer is effected.

All applications of primer to steel surfaces, using materials conforming to references (a), (b), or (c), should be in accordance with reference (d), which requires two coats of primer in the area between the designed deep and light load lines, and one coat of primer for interior surfaces and for all exterior surfaces above the designed deep load line.

Very truly yours,

E. L. Vickery, Commissioner

RJPearson:am

CC: Commissioner Vickery
Attention: Miss I. P. Long
Mr. Bates, Director
Mr. MacPhedran
Technical Division
Records and Files (3)
General Files (2)
Materials Section (12)

Mr. Fleisher
Mr. Sanford
Mr. Melanis
Mr. Spofford
Chief, Emergency Hull Plan
Approval Section
Chief, Hull Specifications
Section

Red Lead Division
Meeting Minutes

Exhibit "B"
April 16, 1944

REVIEW OF RED LEAD DIVISION RESEARCH PROGRAM

The work of the Red Lead Cooperative Committee of the Manufacturers of Red Lead may be briefly summarized as follows:

1. A total of 38 paints containing straight red lead and extended red lead have been prepared and placed on total submersion and tide-level and atmospheric exposure.

To date the most outstanding formulation contains a mixed pigmentation composed of --

85% red lead	7% iron oxide
10% zinc oxide	10% asbestos
10% zinc chromate	8% diatomaceous silica

in a vehicle --

which is 80% Varnish (6 gallon bodied linseed (12) varnish in a resin composed of 80% Barrett's cumar V-2-1 and 60% of Bakelite phenolic resin BRP-32) and 40% modified alkyl (35% phthalic anhydride).

2. Publication in the Engineering News-Record, April 6, 1944, of an article entitled "Red Lead - The Structural Metal Paint".

3. Work in Progress.

(a) Search for a more adhesive, and less reactive film based on the short oil vehicle given above which will dry in four hours and be suitable for recoating.

(b) Testing of samples of vehicles submitted by --

- (1) Bakelite Corporation
- (2) Strooch & Wittenberg
- (3) Resinous Products Corporation

(c) Determination of optimum PV and optimum percentage of each component of the mixed pigmentation given above.

(d) Study of formulations containing chromated lead pigments.

(e) Study of optimum inerts in red lead formulation to meet cost and weight requirements.

(f) Basic anti-corrosive pigment studies.

(g) A complete technical file pertaining to Red Lead including patent data.

4. Continuation of contacts with U. S. Maritime Commission, Navy, Private shipyards, U.S. Engineers in charge of Rivers, Chicago Subway, Railways, Public Roads, U. S. Bureau of Education, Area Supervisor of S.M.S.N.F. and private enterprises.

L. L. Connel

Red Lead Division
Meeting Minutes

Exhibit "C"
April 14, 1944

STATEMENT OF RECEIPTS AND EXPENDITURES

RED LEAD DIVISION

January 1 to December 31, 1943

Expenditures

Salaries	\$2,764.18
Social Security Taxes	180.76
Travel Expense	\$27.29
Telephone & Telegraph	70.48
Engineering Fees	200.00
Entertainment & Luncheons	61.81
Transfer of Headquarters	\$26.30
Miscellaneous	\$2.60

\$5,043.27

Assessments	\$5,043.24
Less: Disbursements	<u>5,043.27</u>

Balance, January 1, 1944	\$2,825.97
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Red Lead Division
Meeting Minutes

Exhibit "D"
April 14, 1944

STATEMENT OF RECEIPTS AND EXPENDITURES

RED LEAD DIVISION

January 1 to March 31, 1944

Expenditures

Salaries	\$2,063.10
Traveling Expenses	166.60
Miscellaneous	89.37
Mailing	.61
Telephone & Telegraph	4.11
Entertainment & Luncheons	2.88
	<u>\$2,316.14</u>

Balance, January 1, 1944		\$3,825.97
Assessments	\$4,713.12	
Less: Outstanding Assessments	<u>245.75</u>	<u>4,467.37</u>
		\$8,293.34
Less: Disbursements	\$2,316.14	
Advances	<u>200.00</u>	<u>2,516.14</u>
Balance, April 1, 1944		\$5,777.20

Red Lead Division
Meeting Minutes

Exhibit "F"
April 14, 1944

PROPOSED RED LEAD DIVISION BUDGET

January 1 to December 31, 1944

Salaries	\$ 9,300.00
Social Security Taxes	250.00
Traveling Expenses	1,600.00
Telephone & Telegraph	200.00
Entertainment & Luncheons	800.00
Postage & Supplies	800.00
Research Materials	2,500.00
Library & Library Research	750.00
Publications	2,800.00
Contingencies	<u>2,000.00</u>
	\$20,000.00