

LEAD INDUSTRIES ASSOCIATION

480 LEXINGTON AVENUE

NEW YORK 17, N. Y.

RED LEAD DIVISION

FINAL DRAFTCONFIDENTIALSUBJECT TO REVISIONRED LEAD TECHNICAL COMMITTEE

New York, New York

October 7, 8, 1948

A meeting of the Red Lead Technical Committee of the Lead Industries Association was held on October 7, 8, 1948 in the offices of the Association. The following persons were in attendance:

Present

Mr. George Dickman
Mr. A. C. Coats
Dr. J. O. Johnstone
Mr. O. F. Shobe

Representing

National Lead Company
The Eagle-Picher Company
Hammond Lead Products, Inc.
The Glidden Company

Mr. R. L. Ziegfeld, Secretary, Lead Industries Association
Dr. L. L. Carrick, Director of Red Lead Research, Meeting Chairman
Mr. C. J. Vander Valk, Technical Director

REPORT ON PAPER ON RED LEAD PRIMERS FOR MARINE ATMOSPHERIC ENVIRONMENTS

The Committee convened at 10:00 A. M. on Thursday, October 7. The meeting was begun with a verbal report by the Technical Director on the presentation of "Red Lead Primers for Marine Atmospheric Environments" before the Houston and Dallas Paint and Varnish Production Clubs on September 14 and 16, respectively. The Committee was informed that a great deal of interest was evidenced at both places and particularly in Houston since many of the members present there were directly interested in the formulation of Marine paints.

The Committee was also told that the Technical Director was attempting to arrange to have the paper presented before one of the eastern Production Clubs before submitting it to the Official Digest of the Federation of Paint and Varnish Production Clubs for publication. The members of the Committee advised the Technical Director to contact in person the chairmen and members of the program committees to expedite an early presentation before one of the eastern clubs. The Technical Director said he would do this.

DR. BROWN'S PAPER - A SURVEY OF HEALTH HAZARDS FROM LEAD PAINT IN SHIPBUILDING

Mr. Ziegfeld informed those present that the revisions suggested for this paper by the members of the Red Lead Technical Committee at the meeting on August 4, 1948 had been submitted to Dr. Brown and that he had declined to eliminate the sections containing data and discussion on zinc chromate paints



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as recommended by the Committee and offered to release the Association from all previous commitment rather than agree to publication of the article without the zinc chromate section. However, Dr. Brown did agree to the majority of the changes having reference to painting practices by the Navy Department in the period covered by the survey.

The Committee was also informed by Mr. Ziegfeld that after consultation with the President and Safety and Hygiene Director of the Association, it was considered advisable to release Dr. Brown's paper for publication in "Occupational Medicine".

PAPER ON MARINE PRIMERS FOR PUBLICATION IN "MARINE ENGINEERING AND SHIPPING REVIEW."

Mr. Ziegfeld reported to the Committee that a paper based on the data in "Marine Primers" by Dr. L. L. Carrick had been written by members of the Lead Industries Association staff submitted to the Executive Editor of Marine Engineering and Shipping Review for possible publication.

When asked about the advisability of submitting papers for publication without approval of the final copy by the Red Lead Technical Committee, Mr. Ziegfeld stated that in view of the urgent need for wide scale publicity for red lead paints he did not think it necessary to take time to submit papers for committee approval that were based on data in previously published papers already approved by the Committee. The opinion of the Committee was divided on this policy.

REPORT ON PROJECT NO. 10 - RED LEAD PRIMERS FOR GALVANIZED IRON.

A written report based on the 27 months performance rating of the painted galvanized panels exposed at Joplin was submitted to the Committee members by Mr. Goets. Results of a 27 months inspection of this same project at Sayville were also submitted to the Committee members by the Technical Director. After study and discussion of the current data from the two test sites the results indicate that:

1. On the basis of the Joplin results the best primers after 27 months were the zinc dust-zinc oxide paints.
2. The Joplin results indicate superiority of lithoform surface treatment over copper sulfate treatment. This cannot be confirmed to date on panels at Sayville containing identical paint systems since practically none of the chemically pretreated areas show any significant deterioration.
3. The best red lead primer after 27 months exposure at Joplin was LIA #168. This paint is comprised of a pigmentation containing 39.4% red lead, 45.1% iron oxide, 9.9% diatomaceous silica and 4.6% aluminum stearate and a vehicle composed of a 1) gallon tung oil para-phenyl phenolic varnish.

The best red lead base primers at Sayville were those not originally included in the program but tested by National Lead Company along with the L.I.A. test paints in an identical manner.

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These included: Paint #273 with a pigmentation containing 26.3% red lead, 58% zinc dust, 13.4% iron oxide, and 0.3% aluminum stearate; Paint #274 containing 26.2% red lead, 71.5% zinc dust, and 0.3% aluminum stearate; and Quick Drying Red Lead, Class XIII. Paint #273 was formulated with a linseed modified long oil glyceryl phthalate alkyl vehicle and Paint #274 was formulated with a 25 gallon tung oil para-tertiary-butyl phenolic varnish vehicle. Except for some chalking and erosion on the areas containing no topcoat, these primers showed excellent performance on all panel areas. Their performance to date is equivalent to that of the zinc dust-zinc oxide primers.

4. In general the paint systems exposed at Joplin have broken down more rapidly than identical systems exposed at Sayville. The relatively rapid breakdown is typical of Joplin exposures. During the warm weather which prevails 5 to 6 months of the year, exposures there are subject to at least as fast a breakdown as in Florida.

It was agreed by the Committee that promotionally valuable and informative technical articles could eventually be written on this project. However, it was also agreed that at least another six months exposure would be necessary to provide sufficiently complete and reliable data for publication.

COOPERATIVE PROJECTS WITH THE NAVY

It was reported that both the Norfolk Navy Yard tests on bottom paint systems and the Philadelphia Navy Yard tests on tide range paint systems had received authorization from the Bureau of Ships.

Mr. Diehlman said that he was informed during a recent visit to the Norfolk Navy Yard that the detailed program outline for the bottom paint tests had been completed and was being sent to the Bureau of Ships for comment and final approval. He also informed the Committee that the paint systems would probably be applied sometime in November and then be exposed at Norfolk, Florida and Sayville.

Mr. Shobe advised the Committee that the additional one gallon samples L.I.A. paints for the Norfolk project had been prepared and were ready for shipment to Mr. Diehlman for subsequent shipment to Norfolk.

The Technical Director reported that the paint samples, formulations, and application instructions had been received by Mr. Cramer at the Philadelphia Navy Yard for the cooperative test on tide range paints. It was also reported that the initiation of this test had not yet been definitely scheduled.

CONSIDERATION OF PROJECT ON PAINTS FOR ALUMINUM

The advisability of an L.I.A. cooperative program on red lead base primers for aluminum alloys was discussed at some length and it was finally decided not to initiate such a program.

It was proposed that the member companies initiate such programs independently and eventually make the results available to the Lead Industries Association. It was tentatively agreed to do this.

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PROPOSED RED LEAD PROGRAM FOR 1949

A proposed tentative 1949 program outline for the Red Lead Division was presented to the committee members. After some discussion the tentative program attached to these minutes as "Exhibit A" was approved.

This program is mainly promotional in nature and is concerned for the most part with publicizing the extensive data obtained from the research programs carried out by the Red Lead Technical Committee throughout its existence.

The only new research program planned for 1949 is one on the painting of gas holders, a large potential field for red lead paints about which few authoritative data are available.

The publicity program planned for 1949 is of a technical nature and will be aimed at technically trained persons engaged in manufacturing, specifying, evaluating and consuming paints. It is planned to reach these groups through appropriate trade journals, technical meetings and personal contacts by the Technical Director.

In addition to the above technical or semi-technical publicity it was also suggested that a general publicity program for red lead be considered. Such a program would be aimed at technical as well as non-technical groups and would require the services of a public relations counselor. Since this was considered to be a problem beyond the scope of the Red Lead Technical Committee, Mr. Diegfeld was asked to discuss with the Red Lead Division Advisory Committee the feasibility of a general publicity program on red lead at the present time.

ATMOSPHERIC PROGRAM - INITIAL REPORT FOR PUBLICATION

A draft of "Cooperative Project On Primer Paints For Structural Steels: Report No. 1 - Description Of Project" was reviewed by the Committee.

It was decided to add the following sentence to the introductory paragraph "To simulate actual conditions encountered in painting structural steel, duplicate angle iron specimens were also exposed at two of the test sites." This was added because the paragraph as written only made reference to the flat panels at the five test sites.

It was also agreed to use "corrosion inhibitive primer" instead of "anticorrosive primer" in the preface and throughout the report.

Concerning the weather data for the five test sites, it was decided to include the average U.S. Weather Bureau figures for the last ten year period rather than those for the seventy year period originally included. It was thought that the data for the last ten year period would probably be more representative of that to be expected during the anticipated exposure period. It was also decided to use Tulsa rather than Kansas City weather data for Joplin.

For illustrating the two types of specimens it was decided to use both photographs and line drawings. It was also suggested and agreed that local identification numbers on the pictured specimens should be explained as well as the actual L.I.A. numbers and letters.

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An important suggested addition to this initial report was an introductory section on paint compositions. It was decided to include this preceding the tables of composition of pigmentations and paints. The proposed section reads as follows:

"Primer Paint Compositions. The comprehensive group of paints involved in this investigation included a wide variety of pigmentations, all incorporated in each of five different vehicles ranging from straight linseed oil to plastic-like synthetic resin types. The pigmentations cover a variety of combinations and utilize red lead, zinc yellow (zinc chromate) and other corrosion inhibitive pigments, one or more of which occurs in each pigmentation. The different pigment combinations are described in detail in Table II.

"The variety of vehicles used provides a wide range of drying speeds and the vehicles were chosen to cope with different environmental exposure conditions. The detailed compositions of the vehicles are given in Table III."

"In addition for purposes of comparison there is included a large group of paints based on accepted specifications as well as several frequently suggested commercial formulations. These are described in detail in Table IV."

The Committee agreed that all paint compositions should be tabulated on the basis of weight per cent composition of pigment and weight per cent composition of vehicle rather than on the basis of weight per cent of total paint as originally planned. It is also planned to include per cent pigment and per cent vehicle by weight of each paint, as well as per cent volatile in vehicle weight per gallon, and pigment-volume ratio.

Several minor editorial changes were also suggested and were voted for inclusion in the final draft.

NEXT MEETING

It was decided to hold the next meeting of the Red Lead Technical Committee on Wednesday, November 3, 1948 in the Palmer House, Chicago, Illinois. A one day meeting is planned to discuss the initial report to be published on the L.I.A. Atmospheric Project.

The meeting was adjourned at 5:00 P.M. on October 8.

C. J. Vander Valk
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Technical Director