

LEAD INDUSTRIES ASSOCIATION

— 400 LEXINGTON AVENUE — 60 East 42nd Street
NEW YORK 17, N. Y.

Pigments and Chemicals Division
SUBJECT TO REVISION

RED LEAD TECHNICAL COMMITTEE MEETING

New York, N.Y.

February 19, 1957

A meeting of the Red Lead Technical Committee was held in the offices of the Association on Tuesday, February 19, 1957.

PRESENT

L. L. Carrick, Chairman
Paul Whitford
O. P. Shobe
R. P. Bates
E. K. Zimmermann

REPRESENTING

Lead Industries Association
The Eagle-Picher Company
The Glidden Company
National Lead Company
National Lead Company

Robert L. Ziegfeld, Secretary-Treasurer
David M. Borcina, Secretary to Committee

The following guests, representing the Association's advertising agency, were also present:

C. Elmer Gischaal	O. S. Tyson and Company, Inc.
W. L. Wyckoff	O. S. Tyson and Company, Inc.

The meeting was called to order at 9:30 A.M. with Dr. Carrick presiding.

The secretary stated that he had invited the advertising agency's representatives to participate in the discussion of the State highway specifications.

REVIEW OF STATE HIGHWAY SPECIFICATIONS

The secretary reported that the data for the shop or primer coat on highway structural steel for all of the 48 states had been compiled and that 47 of the 48 states had red lead specifications.

A discussion then ensued as to the type of information to be included in the Association's first two red lead ads. It was generally agreed that the text for the ads should be based on a statistical analysis of the survey incorporating the following information:

1. Number of states with red lead specifications.



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2. Total number of primer paint specifications and the percentage of red lead specifications.
3. Of the red lead specifications, the percentage requiring 100 percent red lead, over 80 percent red lead and 50 to 80 percent red lead.
4. Also some reference to the versatility of red lead paints which can be formulated to meet exacting requirements for quick drying, low cost, light weight, salt or fresh water exposures or other special conditions.

At this point the agency representatives left the meeting.

The secretary reported that he had also compiled the various State specifications for the "First Field Coat for Structural Steel."

After some discussion, the secretary was requested to make a statistical study of these specifications similar to that being done for the "Primer Paints."

At the same time the secretary was also requested to survey the "Top Coat" specifications only to the extent of determining how many states specify white lead based paints and how many specify other types of paints.

The minutes of the previous meeting of January 17, 1957 were approved with the following corrections within the section "Wetting Characteristics of Red Lead Paints":

Second paragraph: "Mr. Whitford has placed on test at Joplin, Mo., and sent samples for exposures at Perth Amboy, N.J., the following paints:"

Correction: "and New Orleans, La." after "Joplin, Mo."

Last paragraph: "The committee also recommended that the same paints be placed on test at New Orleans, La., and possibly at the Sub-Tropical Testing Station at Miami, Fla. Mr. Whitford agreed to supply paint samples to Mr. Shobe, The Glidden Co. for exposure at New Orleans, but no action was taken on the Miami, Fla. test site."

Correction: Substitute the following paragraphs

"The committee also recommended that the same paints be placed on test at the Sub-Tropical Testing Station, Miami, Fla. and Mr. Zimmermann agreed to make up the test panels and forward them on to the Miami, Fla. test site."

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RED LEAD TECHNICAL LETTER NO. 12

The committee was in unanimous agreement that the title for Red Lead Technical Letter No. 12 should be "Painting Highway Structural Steel."

It was also agreed that the "Technical Letter" should include the following information:

1. Introduction summarizing statistical data on State highway specifications for shop or prime coats.
2. Surface Preparation - To include reference to Red Lead Technical Letter No. 11, and sections from S.S.P.C. Surface Preparation Specifications. Sand Blasting to be included.
3. The four A.A.S.H.O. red lead primer formulations to be included along with an introduction to each of them stressing their advantages and disadvantages.
4. A transition paragraph calling attention to the possible need for touching up the shop or primer coat prior to the application of the first field coat.
5. Recommendations for first field coat to include formulations for the same as primer coat tinted and Federal Specification TT-P-102b.
6. Recommendations for top coat to include white lead formulations specified by New York and Massachusetts.
7. A note indicating that the recommended primers and first field coats are satisfactory for all types of top coats.

PHILADELPHIA NAVY YARD VISIT

The chairman reported on his visit to the Philadelphia Navy Yard relative to the survey of increased costs of applying red lead paints, as per Exhibit "A" attached.

REPORT OF U.S.S. VOGELSANG, HEALY AND ROBINSON

The secretary stated that Mr. W. C. Adamson had reported on his inspection of the U.S.S. Vogelsang (sent to Committee on January 27, 1937).

The chairman requested any of the committee who plan on going to Washington, D.C. in the near future, visit with Mr. Cassow of the Bureau of Ships to determine docking dates for the U.S.S. Healy and Robinson.

PAPER FOR THE HIGHWAY RESEARCH BOARD

The committee agreed on the presentation of a paper at the 1938 Highway Research Board meeting and the subject for such a paper is to be decided at a subsequent meeting.

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L.I.A. PROJECT 24WETTING CHARACTERISTICS OF RED LEAD PAINTS

The committee agreed that the designation "L.I.A. Project No. 24" be assigned to the test program "Wetting Characteristics of Red Lead Paints."

L.I.A. PROJECT 19

The secretary reported as per Exhibit "B" attached, on the ratings of the paints for galvanized surfaces recommended in Red Lead Technical Letter No. 9, and the paints on the aluminized steel test panels, all based on the inspection reports prepared by Mr. Lominaka after 36 months exposure.

It was generally agreed that the committee inspect the aluminized steel panels upon their next visit to Sayville.

"BLAKLED" TEST PANELS

It was generally agreed that the "Blakled" test panels be incorporated in L.I.A. Project 24, Wetting Characteristics of Red Lead Paints.

L.I.A. PROJECT 25CALCIUM PLUMBATE - RUSTOLEUM -
RED LEAD PAINT INVESTIGATION

It was generally agreed that the designation "L.I.A. Project 25" be assigned to this investigation of calcium plumbate, Rustoleum, and red lead primers.

The calcium plumbate paint to be tested is to be prepared according to the formula outlined in Table 4 of the attached Exhibit "C."

Two red lead paints are to be included with the following formulations:

1. Red lead substituted for the calcium plumbate in the formula previously mentioned on a volume basis.
2. A red lead mixed pigment formulation, competitive in cost with the calcium plumbate paint containing approximately 60-70 percent red lead, about 15 percent iron oxide and about 15 percent asbestos.

Mr. Shobe was requested to make up four quarts of each paint and send two quarts each to Mr. Whitford and Mr. Lominaka.

Rustoleum No. 769 primer test panels are also to be prepared and placed on test.

The recommended test procedure was outlined as follows:

Test sites: Joplin, New Orleans, Perth Amboy.

Panel: New untreated galvanized sheet.
Rusted angles, wire brushed.

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Exposure: 45 degrees.
Top Coats: Massachusetts Green.
Primers: As previously outlined.
Applications of Paints:

2	2
1	1

1. Primer.
2. Two primers.
3. Two primers, one topcoat.
4. One primer, one topcoat.

NEW RESINS INTRODUCED

It was pointed out that a number of new resins had been recently introduced to the trade and it was the opinion of the committee that these should be investigated.

There being no further business, the meeting adjourned at 3:50 P.M.

Respectfully submitted,

David M. Borcina

David M. Borcina
 Secretary - Red Lead Technical Committee

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Exhibit "A"
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REPORT ON CHAIRMAN'S TRIP TO THE PHILADELPHIA
NAVAL SHIPYARD NAVAL BASE, PHILADELPHIA, PENNA.
ON FEBRUARY 18, 1957

On Monday, February 18, 1957, I visited Mr. Walter Cranmer of the Philadelphia Naval Shipyard Naval Base in regard to the Navy Yard's participation in the resume of the hazards encountered by the Navy Yard in the spraying of red lead paints. This study was reported by the Navy Department under Serial No. 533P-4180, March 21, 1956, copies of which have been filed with the Lead Industries Association and the Red Lead Technical Committee.

The report of the Philadelphia Naval Shipyard Naval Base in regard to the hazards involved in the spraying of red lead paints was signed by Mr. L. A. Dunning as reported to me by the Bureau of Ships.

Mr. Cranmer reported that they have had no difficulty with the spraying of red lead paints as they insist upon their personnel using the approved methods of spraying paints as outlined by the Bureau of Medicine, Washington, D. C. He also remarked that they have no difficulty in cutting steel covered with red lead with either the acetylene torch or electric arc provided they followed the safety precautions recommended by the Bureau of Medicine. Mr. Cranmer was not familiar with the report which I cited above and after telephoning other personnel in the Yard was unable to find anyone who was conversant with the contents of the report as outlined to him from the Bureau of Ships' questionnaire cited above.

As to increasing the cost of operation, if the safety precautions outlined by the Bureau of Medicine are followed and if more volatile red lead paints as F10 red lead wash primer pretreatment Navy formula 117 were improved, they might have to replace some switches and motors and increase the air flow for ventilation. The switches and motors that are in use at present are not sparkproof. The ventilation might be a little inadequate, but outside of this, the only additional cost would be a closer supervision by inspectors. In general, the Philadelphia Naval Shipyard Naval Base has had a very satisfactory record over a long period of time in regard to application of all types of paint.

In addition to the above, Mr. Cranmer remarked that the Navy is becoming especially interested in the use of epoxy or epoxy modified resins as a replacement for part or all of the present alkyd resins. They are also becoming interested in water emulsion paints. The Red Lead Technical Committee is at present considering the use of water emulsion red lead paints on some exposures to test their suitability for preventing corrosion of steel.

The use of more volatile wash primers and wash primer preparations which contain red lead and other pigments will doubtless lead to improved ventilation and improved conditions which will detract from the hazards of spraying or applying any type of toxic material.

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Exhibit "B-1"

February 19, 1957

L. I. A. PROJECT 19

Rusted Galvanized Panels

(Ratings after 56 months of exposure 45° South, Saville, L.I.)

3 2 primers 1 finish	2 2 primers
4 1 primer 1 finish	1 1 primer
5 1 finish	

R.L.Tech. Letter Formula	Paint No.	Panel No.	Area No.	General Appear- ance	Corrosion	Sealing
No. 9-1	L.I.A. 361	6038A	1	3	9	10
			2	5	10	10
			3	9	10	10
			4	9	10	10
			5	9	9	9
No. 9-2	L.I.A. 362	6040A	1	8	9	10
			2	7	10	10
			3	9	10	10
			4	9	10	10
			5	9	10	10
No. 9-3	L.I.A. 378	6064A	1	5	8	9
			2	7	9	9
			3	9	10	10
			4	9	10	10
			5	10	10	10
No. 9-4	L.I.A. 367	6047A	1	1	8	10
			2	1	9	10
			3	9	10	10
			4	9	10	10
			5	10	10	10
No. 9-5	L.I.A. 368	6049A	1	1	9	10
			2	1	10	10
			3	9	10	10
			4	9	10	10
			5	6	7	9

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Exhibit "B-2"

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L. I. A. PROJECT 19

New Galvanized Panels

(Ratings after 56 months of exposure 45° South, Sarville, L.I.)

$\frac{6}{2}$ primer	and	$\frac{3}{1}$ finish
$\frac{5}{1}$ primer	and	$\frac{2}{1}$ finish
$\frac{4}{1}$ primer		$\frac{1}{1}$

1, 2 and 3 =
Chemical Treatment4, 5 and 6 =
No Treatment

R.L.Tech. Letter Formula	Paint No.	Panel No.	Area No.	General Appear- ance	Corrosion	Sealing
No. 9-1	L.I.A.361	6039A	1	1	10	10
			2	9	10	10
			3	10	10	10
			4	2	10	10
			5	9	10	10
			6	9	10	9
No. 9-2	L.I.A.362	6041A	1	7	10	10
			2	9	10	10
			3	8	10	10
			4	7	10	10
			5	9	10	10
			6	9	10	10
No. 9-3	L.I.A.378	6065A	1	8	10	10
			2	8	10	10
			3	9	10	10
			4	7	10	10
			5	7	10	9
			6	9	10	10
No. 9-4	L.I.A.367	6048A	1	1	10	10
			2	9	10	10
			3	10	10	10
			4	1	10	10
			5	7	10	8
			6	3	10	6
No. 9-5	L.I.A.368	6050A	1	1	10	10
			2	9	10	10
			3	10	10	10
			4	1	10	10
			5	9	10	10
			6	10	10	10

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Exhibit "B-3"

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L. I. A. PROJECT 19

New Aluminized Metal Panels

(Ratings after 56 months of exposure 45° South, Barville, L.I.)

6	3
2 primers	and 1 finish
5	2
1 primer	and 1 finish
4	1
1 Primer	

1, 2 and 3 =
Chemical treatment4, 5 and 6 =
No Treatment

L.I.A. Paint Number	Formulation	Per- cent	Panel No.	Area No.	General Appear- ance	Corrosion	Sealing
363	Pigment: 79.7		6006A	1	1	10	10
	Red lead (97% Pb ₃ O ₄)	30.0		2	9	10	10
	Zinc dust	69.5		3	9	10	10
	Al. stearate	0.5		4	1	10	10
	Vehicle: 20.3			5	10	10	10
	Raw linseed oil	69.5		6	9	10	10
	Mineral spirits	28.3					
372	Pigment: 84.7		6013A	1	1	10	10
	Red lead (97% Pb ₃ O ₄)	75.0		2	9	10	10
	Zinc dust	24.5		3	9	10	10
	Al. stearate	0.5		4	1	10	10
	Vehicle: 15.3			5	10	10	10
	Raw linseed oil	65.0		6	9	10	10
	Mineral spirits	32.9					
395	Pigment: 77.5		6018A	1	1	10	10
	Red lead (97% Pb ₃ O ₄)	99.7		2	9	10	10
	Al. stearate	0.3		3	8	10	10
	Vehicle: 22.5			4	1	10	10
	Raw linseed oil	49.5		5	8	10	10
	Z-2 Body linseed oil	16.5		6	8	10	10
	Mineral spirits	32.6					
	TT-P-86A, Type II		6021A	1	8	10	10
				2	9	10	10
				3	8	10	10
				4	8	10	10
				5	9	10	10
				6	9	10	10

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L.I.A. Paint Number	Formulation	Per- cent	Panel No.	Area No.	General Appear- ance	Corrosion	Sealing
	TT-P-86A, Type III		6024A	1	4	10	10
				2	8	10	10
				3	9	10	10
				4	3	10	10
				5	7	10	10
				6	9	10	10
	TT-P-86A, Type IV		6027A	1	1	10	10
				2	9	10	10
				3	9	10	10
				4	1	10	10
				5	9	10	10
				6	9	10	10
399	Wash Primer		6030A	1	4	10	10
				2	9	10	10
				3	9	10	10
				4	4	10	10
				5	9	10	10
				6	9	10	10
385	Pigment: 79.0		6033A	1	1	10	10
	Zinc dust	80.0		2	9	10	10
	Zinc oxide	20.0		3	8	10	10
	Vehicle: 21.0			4	1	10	10
	Raw linseed oil	72.3		5	7	10	10
	Mineral spirits	25.5		6	9	10	10
365	Naphthenate driers	2.2	6046A				
	Pigment: 71.5			1	1	10	10
	Red lead 97%	30.0		2	9	10	10
	Al. stearate	0.5		3	9	10	10
	Zinc dust	69.5		4	1	10	9
	Vehicle: 28.5			5	9	10	10
	Glyptal 2466	70.57		6	10	10	10
	Mineral spirits	28.56					
374	Lead naphthenate (24%)		6059A				
	Cobalt octoate (6%)	0.87					
	Pigment: 77.5			1	1	10	10
	Red lead 97%	75.0		2	9	10	10
	Al. stearate	0.5		3	9	10	10
	Zinc dust	24.5		4	1	10	10
	Vehicle: 22.5			5	8	10	10
	Glyptal 2466	63.7		6	9	10	10
387	Mineral spirits	35.3	6076A				
	Lead naphthenate (24%)						
	Cobalt octoate	0.8					
	Pigment: 68.5			1	1	10	10
	Zinc oxide	20.0		2	9	10	10
	Zinc dust (add at time of mix)	80.0		3	9	10	10
	Vehicle: 31.5			4	1	10	9
	Glyptal 2466	66.4		5	9	10	10
	Mineral spirits	32.8					
	Lead naphthenate (24%)						
	Cobalt octoate (6%)	0.8					