

REPORT OF INSPECTION OF

LEAD INDUSTRIES ASSOCIATION PADVIS

ON DAM GATES - UPPER MISSISSIPPI RIVER

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Lead Industries Association

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REPORT OF INSPECTION OF LEAD INDUSTRIES ASSOCIATION PAINTS
ON DAM GATES-UPPER MISSISSIPPI RIVER

The test paint systems on Dam 25 at Cap An Gris, Missouri and Dam 26 at Alton, Illinois were inspected on April 2, 1948 by the group of individuals listed below. This inspection was made possible through the cooperation of the St. Louis District Office of the Upper Mississippi Valley Division, Corps of Engineers, Department of Army.

Although inspection ratings were made on both of the dams, the data in this report are limited to Gates 10 and 11 of Dam 25 since these were the only ones containing L.I.A. paints.

A complete detailed description of the paint tests on the lock and dam structures is contained in a report published September, 1947 by the St. Louis office of the Upper Mississippi Valley Division.

PRESENT AT INSPECTION

G. Diehlman	National Lead Co.	W. L. Shaw	National Lead Co.
A. J. Eickhoff	National Lead Co.	G. Walls	Bakelite Corp.
A. C. Goets	Engle-Picher Co.	R. Whiting	Bakelite Corp.
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SUMMARY OF RESULTS

1. Of the paint systems exposed on Gates 10 and 11 of Dam No. 25 since October, 1945 (60 months exposure at date of inspection), those comprising 2 coats of a zinc yellow extended iron oxide-phenolic vehicle primer and 2 coats of a aluminum-phenolic vehicle topcoat, show the highest average performance rating. See Panels 5A and 7A. Except for slight corrosion on the rivet heads located in the water line area, these panels received a perfect rating.

2. The system consisting of 2 coats of L.I.A. No. 3 and 2 coats of the aluminum-phenolic topcoat (Panel 3b) has given comparatively good performance for the 60 month period. It is slightly inferior in average performance to the best performing system mentioned above.

3. Panel 3A containing 3 coats of L.I.A. No. 1 and 1 coat of a white lead base topcoat was rated among the poorest systems exposed since 1945. Although the panel received a perfect rating in the submerged area, considerable corrosion was in evidence in the waterline area, particularly on the rivet heads. This inability to withstand the highly abrasive conditions at the waterline was typical of most of the L.I.A. systems.

4. Sections primed with L.I.A. No. 6 (3 coats under 1 coat aluminum-phenolic topcoat), E. P. 390 (2 coats under 2 coats aluminum-phenolic topcoat), and an iron oxide-zinc yellow paint (4 coats without a topcoat), designated respectively as Panels 12AA, 13A and 5B, have approximately equivalent average performance ratings. Waterline area rivet head corrosion was a common and only significant failing of these systems.

5. Of the panels in service since 1939, 17C and 17D are the only ones warranting particular consideration.

Although both of these panels contain identical paint systems (2 coats of red lead-phenolic primer under a single coat of aluminum-phenolic topcoat), section 17C was treated with a chemical rust-inhibitor before painting and section 17D was not. Panel 17C received an incomparably high rating (9.37) while 17D was among the poorest of those prepared in 1939. The performance obtained on 17C is especially noteworthy when the complete disintegration of the aluminum topcoat is considered.