

LEAD INDUSTRIES ASSOCIATION

480 LEXINGTON AVENUE

NEW YORK 17, N. Y.

RED LEAD DIVISION

January 16, 1948

To Members of the Red Lead Technical Committee:

SUBJECT: CANAL ZONE PROJECT

At the Red Lead Technical Committee meeting of December 11-12, 1947, it was agreed that the Committee should volunteer its cooperation, through Mr. Goetz, regarding a new investigation on protective coatings by the Special Engineering Division, The Panama Canal.

In regard to this matter we have received a letter from Col. Stratton, Supervising Engineer, Special Engineering Division, a copy of which is attached. This matter has been placed on the agenda for the January 29-30, 1948, meeting of the Committee.

Very truly yours,

C. J. Vander Valk
C. J. Vander Valk
Technical Director



C O P Y

THE PANAMA CANAL
CANAL ZONE
Department of Operation
and Maintenance
Special Engineering Division

Diablo Heights, C. Z.,
January 14, 1968.

VIA AIR MAIL

Red Lead Technical Committee
Lead Industries Association
420 Lexington Avenue,
New York 17, N. Y.

Attention: Mr. C. J. Vander Valk

Gentlemen:

The Special Engineering Division of The Panama Canal has been conducting field tests on protection of steel surfaces with hot application bituminous enamels. These test enamels were applied to the Panama Canal lock gates in strips ten feet wide in sufficient length to cover all variations in the types of exposure.

The enamel surfaces exposed to direct solar radiation have failed either by sagging or checking and cracking.

A further investigation is being planned to determine which protective coatings will best withstand the severe solar radiation of the tropics. Alternate and continuous submersion exposures are also planned to provide additional information. Cold application protective coatings and antifouling materials will be included in this investigation. Test panels will be exposed as follows:

Atmospheric exposures at Miraflores and Cristobal, C. Z.
Alternate submersion exposure to sea water, Fort Amador, C. Z.
Continuous submersion exposure to sea water, Fort Amador, C. Z.
Continuous submersion exposure to fresh water, Gatun, C. Z.

The sizes of test panels, to be exposed in duplicate for each system, are as follows:

Alternate and continuous submersion	9" x 9" x 1/8"
Atmospheric	4" x 8" x 1/8"
Laboratory control	2" x 4" x 1/8"

All protective coating systems will be applied to steel surfaces. In addition, for semi-large-scale tests on the Pacific side of the Isthmus only, the following surface areas will be allotted for each protective coating system:

Marine atmospheric, maximum	20 square feet.
Sea water submersion, maximum	200 square feet.

Information is requested as to compatible primer and antifouling compounds which are recommended for use with your products. In this connection, it will be appreciated if you will furnish information covering the items listed below:

Are your products single component systems? If not, state what other components are included, as, for example, primer, top coats, and antifouling coating material.

Are your systems suitable for each of the different exposures listed above?

State approximate type and composition of the material recommended, excepting secret processes and materials.

Name any applicable specifications (Federal, Army, Navy, or others).

Describe the application methods which are most suitable for use with your products.

Furnish data regarding covering ability and cost in large quantities of the products recommended.

Describe recommended service behavior and laboratory identification and performance tests.

Furnish data or literature describing your products, especially long term service performance if available.

Should specific primer or antifouling materials be used to insure compatibility of these with furnish coats?

Are specific thinners or are special handling procedures necessary to insure satisfactory results?

It is realized that some of the above requested information may be considered confidential. You may be assured that any information of this nature will be held in strict commercial confidence.

Your early reply will enable us to expedite the initiation of this further investigation of protective coatings.

Very truly yours,

/s/ James M. Stratton

/u/ JAMES M. STRATTON,
Colonel, C.E.,
Supervising Engineer.