

Lead Industries Association

420 LEXINGTON AVENUE

NEW YORK, N. Y.

CLARENCE H. CRANE, President
WALTER H. BROWN, Vice President
WILLIAM H. BROWN, Secretary
ALFRED L. BROWN, Treasurer

July 7, 1930.

TO THE MEMBERS OF THE LEAD INDUSTRIES ASSOCIATION:

RESEARCH ON PROTECTIVE PIPE COATINGS

FOR PETROLEUM LINES

The Lead Industries Association has entered a cooperative and competitive test of prospective pipe coatings for petroleum lines conducted under the auspices of the Bureau of Standards for the American Petroleum Institute. Our entry is a priming coat of red lead baked upon the pipe. The test is similar to that being conducted by the American Gas Association and the Bureau of Standards, which the Lead Industries Association entered last year in the interests of a baked red lead priming coat, the details of which were reported to you in a memorandum dated October 11, 1929.

The sections of pipe to be used as test pieces were coated during the first week in June at the plant of the National Tube Co. at Versailles, Pa., as before under the supervision of the Research Laboratories of the National Lead Company. The actual burial of these specimens in various field locations began on June 23. In the A. P. I. test we entered red lead in combination with three protective finishing coats instead of two as in the Gas Association test, i. e., baked red lead priming coats followed respectively with (1) the regular asphaltic coating and wrapper manufactured by the National Tube Co. (2) the bitumastic enamel secondary coating of the Walles-Dove-Hermiston Corp., and (3) a regular emulsified asphalt coating as made by the Headley Emulsified Products Co.

The red lead paint used for the priming coat had the following composition:

Regular 98% paste red lead	100 lbs.
Boiled linseed oil	2 gals.
Small amount of turpentine	

This paint was applied by hand with a four-inch brush to three-inch pipe of the National Tube Co. It was then baked over a

-2-

gas oven commonly used to heat pipes before giving them an asphalt dipped coating. The red lead primer should be baked at about 300° F for approximately a half hour, but as conditions were poor for accurate temperature control a lower temperature and longer time were used in order to avoid any possibility of burning the paint.

The emulsified asphalt was applied over the red lead by a representative of the Headley Emulsified Products Co., manufacturer of this coating. The National Tube Co. coating consisted of a double application of a spirally wound cambric rag, applied by machine and passing through a molten asphalt mixture just before being applied to the pipe. It then received a spirally wound cover of Kraft paper as a protection during transit.

The bitumastic enamel was applied under the supervision of a representative of the Valles-Dove-Hermiston Corp. It consisted of a black priming coat of tar paint applied by hand and followed the next day by their molten bitumastic enamel applied with a sling.

Three pieces of pipe carrying each coating will be buried at sixteen different sites throughout the country tentatively selected as follows:

Mt. Auburn and Council Hills, Ill.

Oklahoma City and Skiatook, Okla.

Beaumont (2), Houston and Temple, Texas.

Bunkie, La.

Caney and Arkansas City, Kans.

Preble, Ind.

Long Beach, Mendota and San Luis Obispo, Cal.

Lancaster, Pa.

The burying operation will require about four months. At the end of one year, one piece from each test will be taken up at each location, and the condition of the pipe at that time will determine how soon the other pieces will be taken up for examination.

The red lead paint used this year in the A. P. I. test conformed more to recommended practice than the red lead paint that was used last year in the A. G. A. tests, in that it contained more oil, less turpentine, and possessed a higher true red lead content. Both variations were, however, selected because of the ease with which they could be compounded and applied though a formula similar to the one given above with from one to three quarts of linseed oil replaced by turpentine would be a more satisfactory compromise for the varying conditions which must be met.

-3-

Our object in cooperating with the American Gas Association and American Petroleum Institute in their respective research programs, is, of course, to develop a comparatively new outlet for a lead product.

Respectfully submitted,

F. E. Worman

Secretary.