

LEAD INDUSTRIES ASSOCIATION

60 EAST 42ND STREET
NEW YORK 17, N. Y.

Re Chemical Bulletin No. 72

October 28, 1959

LEAD CHEMICAL CONSTRUCTION

BULLETIN NO. 72

SUBJECT: "BETTER WAY TO LEAD-LINE

YOUR WOODEN TANKS"

Enclosed is a reprint of "Better Way to Lead-Line Your Wooden Tanks" which appeared in "Plant Notebook," September 7, 1959, issue of "Chemical Engineering."

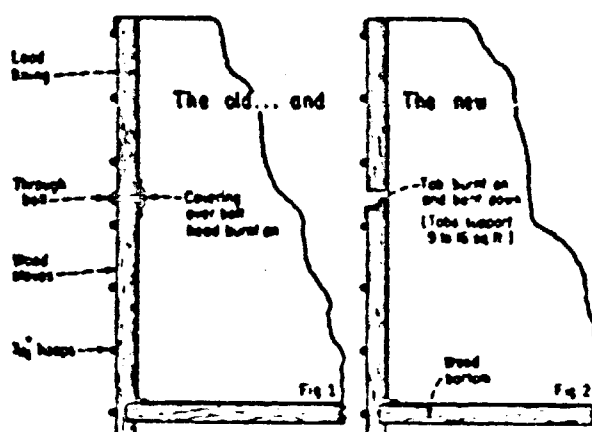
This item refers to a lead-tab method for fastening sheet lead linings to wood stave tanks and is purportedly an improvement on the old covered-bolt method.

Additional copies are available as long as our supply lasts.

Very truly yours,

Robert L. Ziffer
Secretary.





Better Way to Lead-Line Your Wooden Tanks

Usual method is too rigid, makes trouble spots when temperatures vary; lead-tab method shown here has worked for 15 years without trouble.

★Winner of the Midsummer Contest by
Arthur E. Hughes

Research Laboratory, Rumford Chemical Works, Rumford, R. I.

Sketched above are two methods of securing a lead lining within a wooden tank. The method on the left is the conventional one, while that on the right is an improved method I have used successfully for the past 15 years. It provides a flexible means of attachment which avoids trouble due to expansion and contraction of the lead with changes in temperature.

In Fig. 1, the conventional method, the lead lining is fastened to the side of the wooden tank by bolting through and then covering the head of the bolt with sheet lead which is burned around to make it tight. This method is satisfactory if there are no temperature changes. However, in normal chemical plant use with hot liquids, such a bolt holds the lining too rigid,

causing a buckling tendency and producing a trouble spot with continued expansion and contraction of the lead.

My improved method was first used 15 years ago on 12 lead-lined tanks of 20,000 gal. capacity. These tanks, lined with 8-in. lead, operate at about 224 F. and have never given the slightest trouble at the attachment points.

In Fig. 2, the new method, lead tabs burned to the lining are used instead of the through bolts. They extend out through holes cut in the tank staves and are hooked down over the staves for flexible support.

Before lining, we have a number of 3 x 3-in. holes cut through the staves. These should be on 2- to 4-ft. centers. For example, in a tank 6 ft. high, we would put a row of holes half way up and at intervals of about 3 ft. around the periphery. In a tank 12 ft. high there would be rows of holes 4 and 8 ft. from the bottom, spaced about 4 ft. around the periphery.

The tabs are made of lead of the same weight as the lining, about 3 in. wide and 4 in. long. These are placed in the opening and burned to the lining, then turned sharply down over the edge of the staves. The 3 x 3-in. opening is necessary to give the lead burner sufficient space in which to work while he is attaching the tabs.

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