

REPORTS OF THE STAFF

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For some years LIA had been interested and concerned with what was happening to the use of lead in the Chemical Construction Field. Because of a shortage of manpower no in-depth investigation was made. cursory investigation thru the years by LIA indicated that the market was slowly being lost to the lead industry as the result of active and progressive promotional activities of competing materials.

When I came to LIA slightly less than a year ago (I just missed last years Annual Meeting) I was assigned, because of my chemical engineering background, the task of conducting a market study into the uses of lead in the chemical industry. The results were interesting with a few bright spots that might be used to advantage. A more comprehensive report of this study will be sent to the members in a few weeks.

Briefly, I called on pipe and sheel lead manufacturers, lead burning contractors, and chemical construction engineers for their thoughts and opinion about lead as a chemical construction material. In essence, I found among knowledgeable engineers lead is preferred for sulfuric, phosphoric and chromic acids at elevated temperatures from 150°F to 250°F. Unfortunately, knowledgeable engineers are few and far between. The younger engineers know little about lead, and what they do know is generally erroneous. From a first hand standpoint, after I spent two years as a process engineer around pickling acids I never saw a lead lined tank nor was I aware that lead could be used!

The major competition to lead is PVC. And yet there are areas, usually at higher temperatures where PVC is inadequate and lead is more than adequate. I have run into many instances where people have switched back to lead after trying PVC. My study indicated that there are areas where lead is the best material for the job. And perhaps some concentrated effort by the industry in promoting lead in the chemical industry might reverse the trend. Also there are some new developments coming out of research, specifically adhesive bonded lead and dispersion strengthened lead that might be advantageously exploited.

Another area that I was asked to investigate was, "How much basic research is being conducted on the lead-acid battery." There may be such research going on, but if it is, it was not revealed to me. Outside of the work being done by ILZRO, the Naval Research Labs and Bell Labs, most of the work being done is engineering rather than basic research.

I did find some basic research on battery components like plastics, fabrics, etc., that is not directed toward the lead acid system but to all types of batteries. So if improvements are made, it may or may not benefit the lead acid system.