

LEAD INDUSTRIES ASSOCIATION

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NOT FOR PUBLICATION

BUILDING CONSTRUCTION

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When Bob Ziegfeld asked me to talk to you about what is going on in the plumbing and water distribution field as it relates to the use of lead, I hesitated to undertake the assignment for two reasons. In the first place it is difficult for any one man to be thoroughly familiar with all parts of the country as practices vary quite widely from section to section and to my knowledge there are no reliable statistics available on consumption of various materials by these industries. In the second place, since the Plumbing Contractors' Association of Chicago, whom I represent, deal with all plumbing materials, I do not want to become involved in any embarrassing discussions as between the different materials.

However, Bob assured me that all you want is facts and I don't think anybody can object to my giving you those as I see them.

Over a period of many years in the plumbing industry, as a plumber, a city official, and an officer and director of the American Society of Sanitary Engineering, I have had a good opportunity to view trends in plumbing and water works practice. During that time there have been many changes. Once lead and cast iron with lead joints were unquestionably the standard plumbing and water distribution materials.

After World War I a new trend developed. Other metals, like galvanized iron and steel, came into more general use. A little later copper tubing was added as a competitor in water distribution. Today it has also become a competitor in plumbing, soil and waste pipe. Such materials as transite, impregnated fiber and others are competing with lead-called cast iron.

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All this has been reflected in the amount of lead used as pipe, fittings and calking lead. In general the newer materials have a lower first cost and do not require the same degree of skill to install. Nevertheless the innate qualities of lead have served to keep an appreciable amount of it in use. Many cities still require lead for water service pipe. Chicago is one. Others greatly restrict the use of anything but lead and cast iron for inside plumbing.

At this point I might explain, for the benefit of those of you who are not close to the plumbing industry, just how the materials and methods used in plumbing are controlled.

The materials that may be used in the plumbing system are generally set up in detail in the plumbing code, which is a city ordinance, or sometimes a county or state law. Also, the water service pipe material, that is the pipe from the street main to the house, is, in some cases, controlled by the plumbing code and in others by the regulations of the water department or water company. Therefore, in order that any material may be used it is usually necessary first to see that it is permitted by the plumbing code or water department regulations.

Lead is permitted by practically every plumbing code and water department regulation. I emphasize the word "permitted" because of the fact that it is permitted does not necessarily mean that it will be used. Other materials may also be permitted.

In the old days only a few materials were included in the codes and lead was one of them. Therefore, lead was used in most plumbing installations. As newer materials have been developed, codes in general have been broadened to include many of these materials also. Consequently, as time has gone on, although lead is still permitted, it has met more and more competition from other materials which, in many cases, are either cheaper in cost, or cheaper to install. Thus less and less lead, in proportion to the total, has been used in more recent years.

This trend is by no means uniform. There are certain parts of the country which have strenuously resisted the introduction of newer materials and there are other parts which have gone over to the newer materials entirely. Conditions vary greatly between two neighboring cities. Thus today you have a situation in some cities, and in some sections of the country, where it is almost a "must" to use lead in the plumbing system and other places where, although lead is permitted, it may not be used at all, or only to a very minor extent.

Further, to complicate the situation in recent years there have been extensive efforts to prepare national plumbing codes. Several such codes have been drafted by various organizations, recently. These national codes are intended as models for cities to adopt in their own ordinances with the idea of more or less standardizing plumbing so that the same procedures will be followed in all parts of the country. The organizations sponsoring these codes naturally are making great efforts to have them adopted locally. Because they are national codes their provisions are, naturally, very broad and when it comes to specifying

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materials they specify practically every material that is in use anywhere. This means that if adopted in those sections of the country which are now important lead users, less and less lead may be employed. It is, however, not necessary for a city to adopt them in full for any city using them as a model can make its own modifications, either as to methods or materials.

Another thing militating against the continued use of lead in certain parts of the country is the end of war-time shortages of all sorts of materials. In a search for markets, the manufacturers of those materials are making every effort to have their materials permitted by plumbing codes which now restrict their use.

So, the upshot of it all is that the plumbing code situation all over the country is now in a state of turmoil. Hundreds of cities are working on revisions of their codes, and lead, being one of the few materials that is permitted by practically every code, naturally stands to lose more than other materials if code provisions are broadened with respect to the materials permitted. What I have said about plumbing codes is equally true of water department regulations.

As I see the situation looking at it from your standpoint as producers of lead and lead products, lead is in a critical position. It once had the field pretty much to itself but conditions have thrown it more and more into the competitive market. There is no question but that the work of the Lead Industries Association has done much to keep lead an important factor in the picture. Nevertheless, events in the last few years, more than ever before, threaten your market in the plumbing and water distribution field. I don't see any reason why lead can not continue to be an important material for plumbing and water distribution, but certainly it will require great effort on the part of the lead industry, (1) to maintain the pre-eminence of lead in those localities where it still is the preferred material, and (2) to have people use lead in competition with other materials in those localities where anything goes.

I realize that I have not supported the generalities which I have stated with any figures, which is impossible to do. In support of my statements I could quote from the plumbing codes of a number of cities which would clearly show you how great is the variation so far as material requirements are concerned from city to city.

In Chicago, for instance, we are required to use lead for water service pipe of 2-inch or less, but we can use other materials for plumbing within the building. In Houston, Texas, on the other hand, just the reverse is true. In Indianapolis, one does not have to use any lead but in the State of Kentucky there has to be at least six inches of lead in every fixture connection. This will just give you a rough idea of how complicated things are.

Further to complicate the situation is the fact that lead requires a skilled mechanic to install, which makes it necessary, if lead is to continue in use in large quantity, to train the mechanics coming into the plumbing industry to be good lead workers.

This would seem to make a rather gloomy picture to you people in the lead business, but I do not think it need necessarily be so. As I said before, lead has certain merits which justify its use in a great many plumbing installations, but like any material, it can not sell itself in the face of the intensive competition which it must meet in plumbing today. I believe that you can continue to enjoy a substantial business in plumbing and water works fields if, and only if, your industry puts its best foot forward.

Despite the fact that the plumbing industry has always recognized lead as one of the essential materials for the craft, attempts are being made today in many localities to minimize existing plumbing code requirements, regardless of the safety of the citizens of the community. So it behooves the members of the Lead Industries Association and all other branches of the Plumbing Industry to acquaint the public and city officials with the importance and necessity of rigid code enforcement of good safe materials and installation in the interest of public health protection.