

Edwin D. Martin

ARCHITECTURAL SERVICES

It seems to me, in view of the connection lead had with the event, that not enough comment has been forthcoming on the fact that this year is the two hundredth anniversary of the founding of Saint Louis. The present site was discovered by Pierre LaCade Liguist in the year 1764. Now, I have it on good authority that this old French explorer, as he sailed down the Missouri River, had a lookout in the bow of his boat taking soundings continuously with a lead line. For those who may be unaware of what a "lead line" is: it's simply a stout cord armed at its end with a lead weight and marked at intervals to indicate depths of water passed through. So, in casting the lead line, it becomes obvious that lead was an early "settler" here; in fact, the first.

May the good Lord forgive me for that pun — At any rate, lead has given a good account of itself ever since — and gives every promise of doing a great deal more as our current program of education progresses. I mention "education" first because that term, probably more than any other, embraces most of the problem we face. We can stay right here in Saint Louis for the best illustration of what I mean. You may have already seen the new Blue Cross building down on Olive Street with its pool and planters representing the Blue Cross insignia. They are lined with lead of course. But, when I first contacted the architects several years ago, lead was in serious trouble. Someone had said the lining needed to be 1/4-inch thick and the architect, understandably, was about to throw that idea out the window. Not that you can throw 16-lb. lead very far, but even that opportunity would not have presented itself if more knowledgeable heads had not informed the architect that he needed only 6- or 8-lb. lead to do the job. Incidentally, the architects for the building are now residents in it, having moved there shortly after it was completed. I don't mean to imply the lead lined pool and planters were directly responsible for that but I do mean to point out that rental space in today's steel and glass temples of commerce is made more attractive through the softening effects of reflections in water or by landscaping. We are increasing our efforts in this area and are meeting with considerable success. Mention of a list of these installed over the past year or two, and involving several hundred tons of lead, can be found in Mr. Ziegfeld's "Report of Association Activities" which you have in your possession.

It is not a far cry from "Pools and Planters" to "Roofing and Flashing" since both are waterproofing membranes. The main difference being that one involves large, unbroken surfaces while the other is made up of multiple units. We are presently preparing a booklet which will, we hope, go a long way to acquaint not only the architect but the roofer as well on proper installation methods which will take advantage of lead's unique properties for this purpose. Again, of course, this is a matter of education and I have every confidence that this issue will generate at least as much interest as our Pools and Planters booklet did.

When all is said and done, however, the testimonial of a successful installation is the best education of all. It seems particularly fitting therefore that one of the finest institutions of higher learning in the United States should be in a position to provide such a testimonial. The installation

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of a lead roof of a most unique type of construction on the Kresge Auditorium at M.I.T. in Cambridge, Massachusetts (mentioned last year) has successfully withstood the test of a full year's time. I am very happy to report that a recent formal inspection by University authorities, the contractor and representatives of the Architect has revealed no serious defect. Sixty tons of lead sheet have here answered a roofing problem which a number of other roofing materials had failed to solve.

Out in Ohio, where American Electric Power Company is installing lead waterproofing under a landscaped roof on their Computer Center, the problem was not quite so difficult to solve. Yet the consequences of failure are possibly greater. An unscheduled stoppage in such an installation would cost the owner about \$1,000 an hour, beginning with the first hour. As a consequence the owner, in this case, didn't experiment with other systems first -- he started with lead! 12 tons of lead were used on this roof, but this figure expands rapidly when multiplied by the number recently completed and the considerable potential we have across the country.

This business of "multiplying" ties in rather neatly at this point with one of Bruce Fader's favorite stories which, I hope, he won't mind my borrowing for a moment -- It concerns God's admonition to all living creatures on the Fourth day of Creation, when He said: "Be fruitful and multiply and fill the Earth." Well, the Angel of the Lord sometime later, in checking to see that this admonition was being followed, found all doing wonderfully -- with one exception -- a pair of small snakes, alone, apart and unhappy. When the Angel reported this lonely exception, the Lord simply, and without hesitation, instructed the Angel to cause a number of trees to be felled and deposited near the unhappy pair. Which was done -- On the next visit to Earth, the Angel was startled to find a very happy and extremely large family of little snakes had resulted. Puzzled, he returned once more to God and was promptly informed that these little snakes were actually adders and therefore, needed only a supply of logs to enable them to multiply. -- Truthfully, I feel that in the not too distant future we are going to need logs to keep track of the multiplicity of lead-asbestos vibration pads in use. Use of these vibration attenuators has increased at a good pace for damping railroad generated disturbances. Recently, none other than the City of New York has undertaken to use them to damp traffic born vibrations, from heavy trucking and passenger car traffic.

We have been given permission by the City for I.L.Z.R.O. to test this installation in their new Public Health Laboratory and, I believe, it will be an ideal opportunity to add to our fund of usable data for engineering design. It happens that in this same building, pads are also being used under cooling tower supports on the roof, a further opportunity for on site testing. This, coupled with data from test sites in the latest, new Grand Central area building, should result in information that will help the engineer to tailor these already proven devices to his particular set of circumstances. It is at this point that we will be equipped to widen the use for these pads whether for damping railroad vibrations or traffic disturbances or for the myriad uses and variations possible as machinery mounts. Here is an application for lead where price is not a major factor, where longevity is essential, and where effectiveness has already been proven empirically over a period of many years.