THIS RELEASE SENT TO PIN 1 - Members
9 - METALLIC LEAD PRODUCTS DIV.
11 - CHEMICAL BULLETIN

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

November 25, 1957

SUBJECT: LEAD BUILDING CONSTRUCTION BULLETIN NO. 3.

To Members of the Lead Industries Association:

Enclosed please find a copy of the third of our series of Lead Building Construction Bulletins entitled:

"Specification for Lead Chemical Laboratory Drainage Systems"

The previous bulletins were issued last year as follows:

Lead Building Construction Bulletin No. 1 -
Specification for Lead Waste Connections for Plumbing Fixtures with Integral Traps

Lead Building Construction Bulletin No. 2 -
Specification for Lead Shower and Safe Pans

Lead Building Construction Bulletin No. 3 is being distributed to approximately 20,000 architects and others in the building industry as well as to a selected list of plumbing contractors.

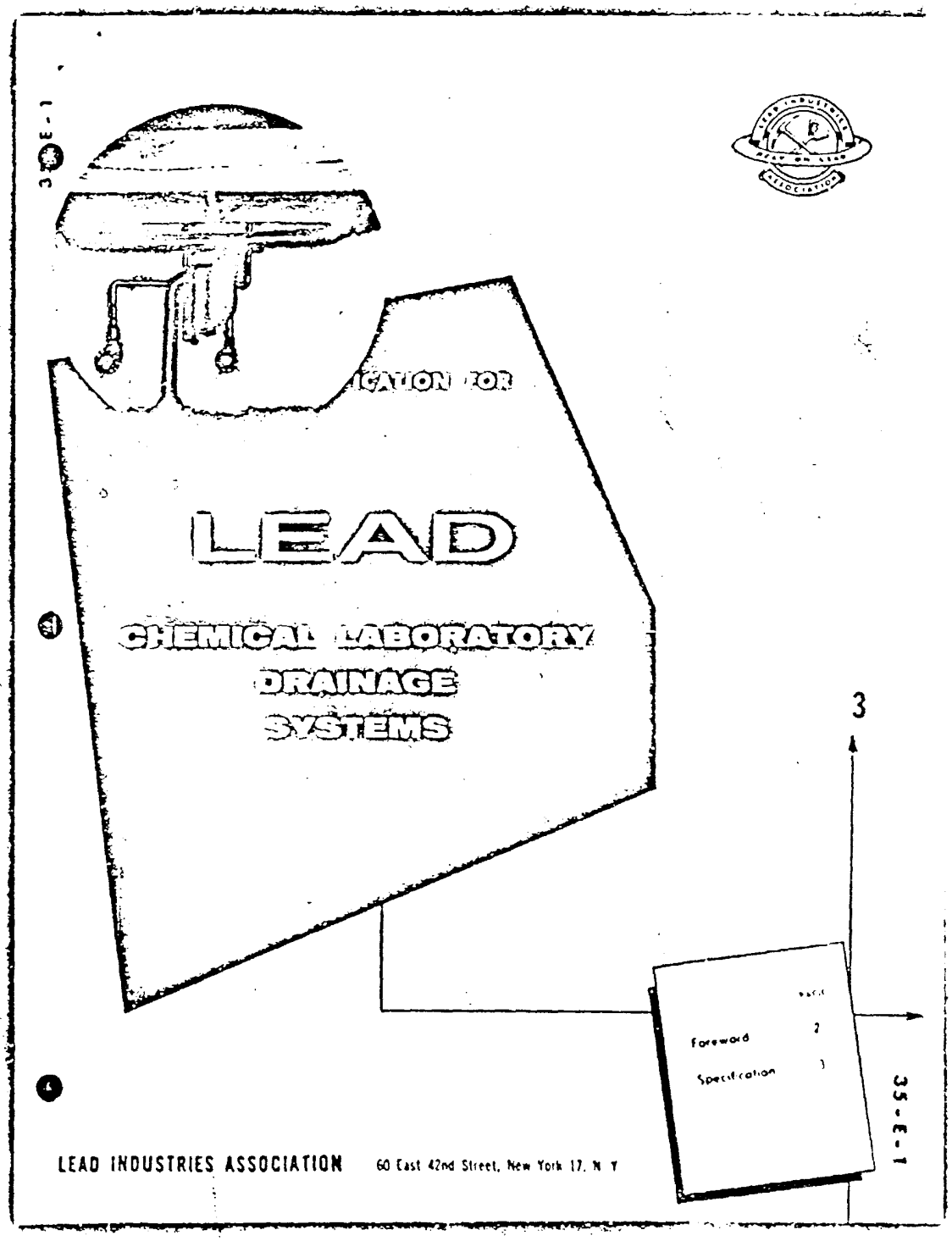
Extra copies are available to members in quantities up to 25 at no charge. Larger quantities are available at our cost of $4.50 per 100, plus mailing charges.

Sincerely yours,

Robert L. Zeigfeld

Secretary

LIA21508



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Specification For
CHEMICAL LABORATORY DRAINAGE SYSTEMS

Laboratory drainage and vent systems shall not be directly connected to the sanitary drainage system of any building.

Laboratory wastes may discharge into the building sewer only after passing through dilution or neutralizing chambers acceptable under local and state plumbing, building or health department requirements.

MATERIALS

All lead products for chemical laboratories shall be made from pig lead meeting requirements of ASTM Specifications Serial Designation B-29 for chemical, acid or copper lead grades.

Antimonial (hard) lead, when specified, shall be an alloy containing 4.0 to 7.5 per cent antimony.

LEAD WASTE AND VENT PIPING for chemical laboratories shall be Class B or M weight conforming to Federal Specification WW-P-325.

(Exception — for educational units "D" or "XL" weight lead pipe in accordance with Federal Specification WW-P-325, may be used where accessible. See Lead Building Construction Bulletin No. 1)

LEAD-COVERED TABLE TOPS shall be made with at least 4-lb. sheet lead with lead formed firmly over all edges and corners by bossing or folding. Corners may be cut and burned.

LEAD-LINED SINKS shall be lined with at least 4-lb. sheet lead. The sheet lead shall be formed over the rim of the sink to form a complete lining covering all surfaces exposed to fluids or splash.

LEAD CUP SINKS OR WASTE BOWLS shall have a wall thickness of at least 5 32-in. and be cast lead or be spun from lead pipe. Threaded tailpiece connection cast with bowl, or lead sink plug and strainer, is acceptable. (Bowls made from 10-lb. sheet lead may be used.)

LEAD-LINED TABLE TROUGHS shall be lined with at least 4-lb. sheet lead. Outlet end shall be extended below supporting material to prevent capillary attraction carrying fluids along underside of trough into table construction.

LEAD TRAPS shall have a wall thickness comparable to the lead pipe to which it is connected and have at least a 2-in. trap seal. All cleanout plugs, trap screws, covers and rings shall be of cast hard lead with standard pipe threads, and ring shall be lead burned to the body of the trap. (Trap pattern shall conform with requirements of local plumbing regulations.)

LEAD-LINED ACID TRAYS shall be lined with at least 4-lb. sheet lead. A 1½-in. lead sink plug and strainer shall be used for outlet connection. The bottom of the tray shall pitch from all directions to the outlet.

JOINTS AND CONNECTIONS

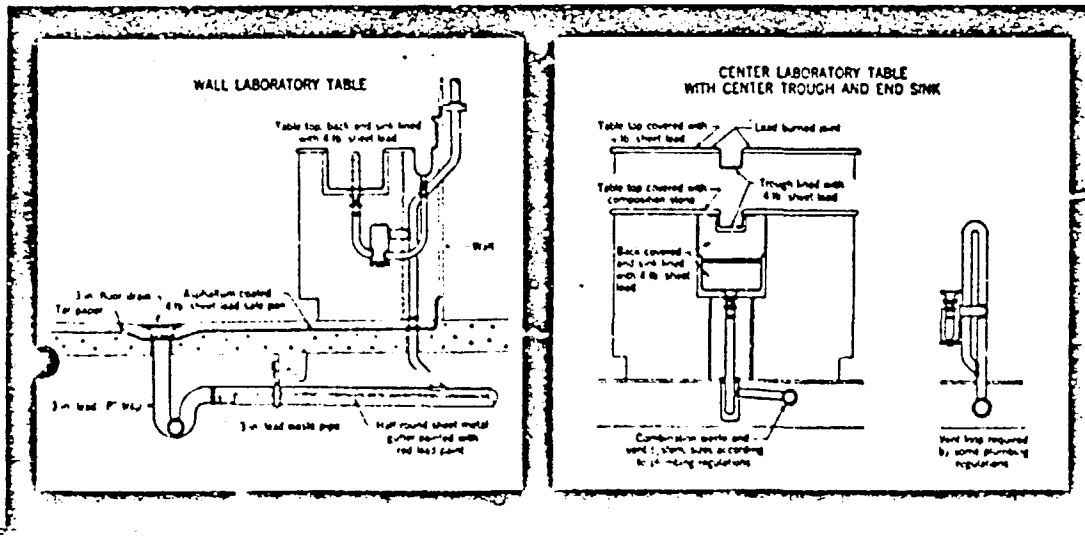
All joints in lead pipe or sheet shall be lead burned. Lead burning is the fusing of the lead with a flame, hence, a true weld. Soldered joints are not permitted.

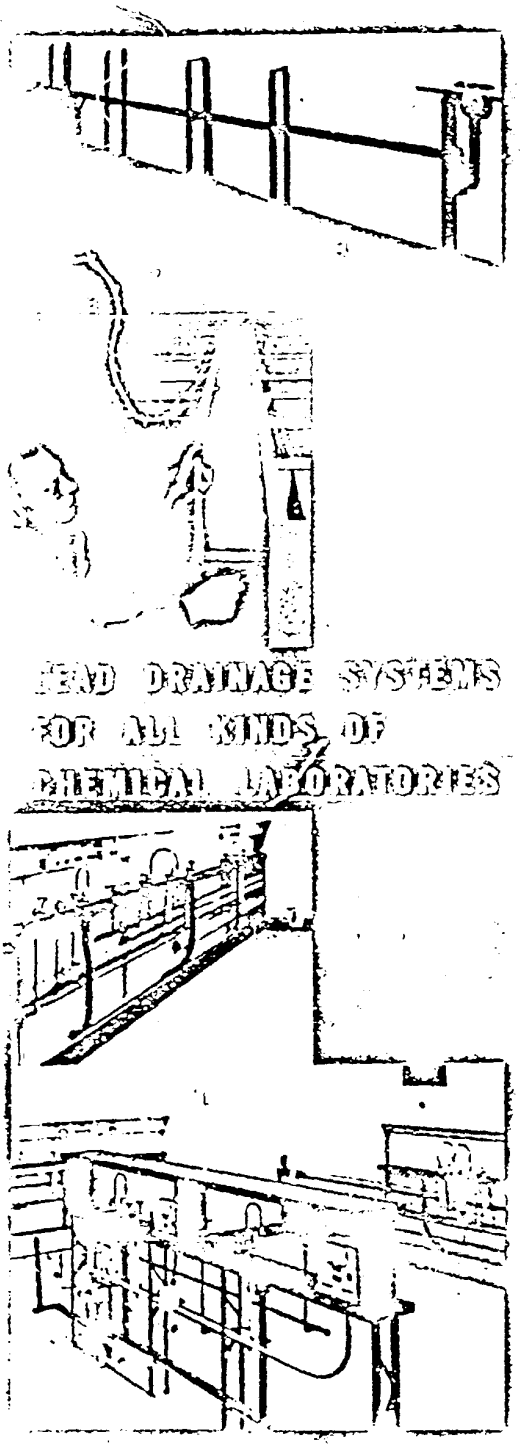
LEAD-BURNED JOINTS for waste and vent piping shall be regulation lead-burned joints fused together to form a uniform weld at least as thick as the pipes being joined. Lapped joints shall be used on sizes up to and including 2 in.

Lead-burned joints for sheet lead shall be regulation lead-burned butt or lap joints fused together to form a uniform weld at least as thick as the material being joined. Butt joints shall be used for sheet lead over ⅛ in. thick.

Lead-burning rod shall be of same composition as material being burned.

LEAD-LINED SINK AND ACID TRAY WASTE CONNECTIONS shall be made by using proper size lead sink plug and strainer with lock nut or by burning strainer body to lead lining.





LEAD DRAINAGE SYSTEMS FOR ALL KINDS OF CHEMICAL LABORATORIES

IN CHEMICAL processing plants, the piping, storage and other equipment for handling corrosive chemicals may be designed with specific references to the corrosion resistance of materials to the particular chemicals to be handled. In school, college, hospital, plant, and other laboratories, however, materials must be selected which have good corrosion resistance against the widest possible variety of chemicals because there is no beforehand knowledge of what chemicals will be used and the variety is invariably great. Since lead is probably more resistant to corrosion by a greater variety of chemicals than any other common metal, it is therefore one of the most useful materials for laboratory piping, fittings, sinks, troughs, and the like. For the guidance of architects and engineers who want to take advantage of the excellent characteristics of lead in laboratory design, the specifications and practical suggestions on the following pages have been prepared.

CORROSION RESISTANT — Lead has greater resistance to corrosion by a greater variety of chemicals than any other common metal.

FLEXIBLE — Lead is easy to install to meet even the most difficult conditions with a minimum of joints, since it can be readily bent for changes of direction and will take up movement or expansion and contraction without damage.

BONDED JOINTS — Joints in lead are burned thus presenting only lead exposed to the corrosives, without special fittings or other metal, and with lengths bonded together so that joints cannot loosen and leak.

ADAPTABLE — Because lead is adaptable to most all conditions, there is no need to bear with special high-cost alloys. Also with lead, the use of expensive fittings are minimized.

AVAILABILITY — The lead pipe, fittings, and sheet lead for laboratory work are standard items available everywhere throughout the country.

LOW COST — Because lead pipe needs no expensive fittings when joints or changes of direction are made, the cost is minimized.

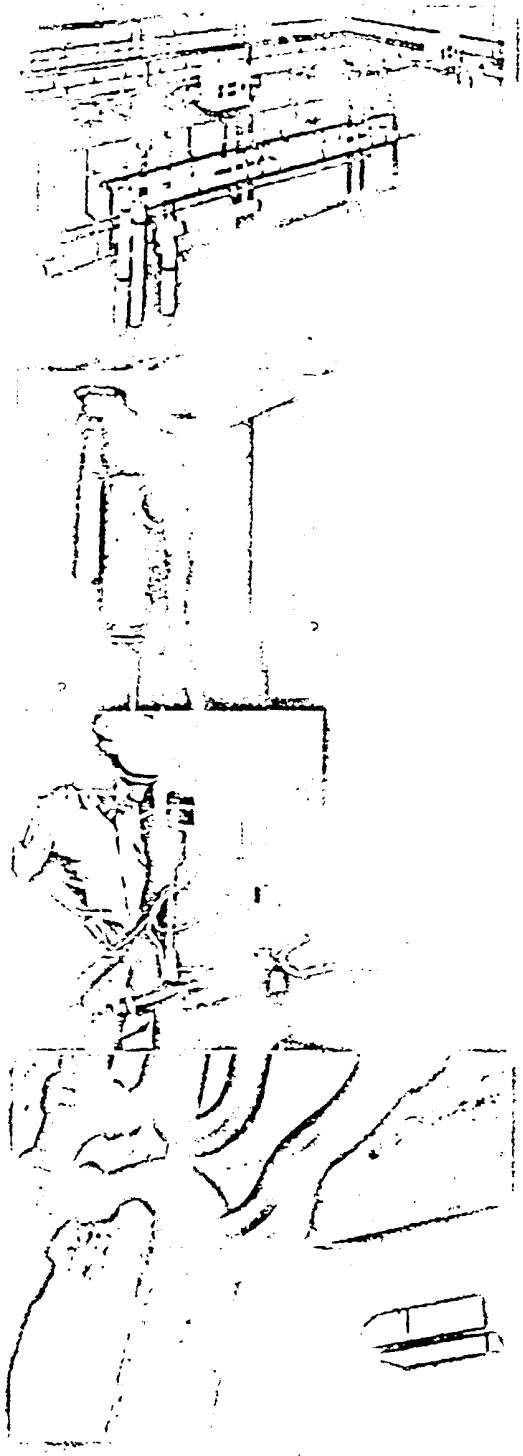
TECHNICAL ASSISTANCE — The technical staff of the Association is at your disposal in helping you solve your lead problems. Other Bulletins in this series include:

Lead Building Construction Bulletin No. 1.
Specification for Lead Waste Connections for Plumbing Fixtures with Integral Traps.

Lead Building Construction Bulletin No. 2.
Specification for Lead Shower and Safe Pans.

Address your request for literature and other inquiries to:

Architectural Dept., Lead Industries Association, 60 East 42nd St., New York 17, N. Y.



ALBERENE STONE OR OTHER CHEMICAL-RESISTING SINK WASTE CONNECTIONS shall be made by using proper size lead sink plug and strainer with lock nut. Red or white lead putty may be used under sink-plug body to form gasket.

LEAD CHEMICAL SINK PLUGS, STRAINERS AND BEEHIVE STANDING OVERFLOWS shall be made of cast or extruded hard lead, using hard lead tailpiece for trap inlet connection. All threads shall be standard pipe thread.

Joints may be union, flange, or burned where tailpiece is joined to strainer piece outlet.

LEAD TRAP JOINTS. Inlet and outlet and cleanout plugs for lead chemical traps shall be lead-burned joints.

LEAD WASTE AND VENT CONNECTIONS. All joints between lead pipe or fittings and acid-resisting cast iron shall be made as follows:

When lead waste or vent pipes are connected into acid-resisting cast iron with caulking hub, a regulation lead caulked joint shall be used except that treated asbestos packing shall be used in place of oakum.

Hard lead ferrules burned to lead pipe shall be used. Brass ferrules may be used when the lead pipe is extended through the ferrule and turned back over the head on the spigot end of the ferrule. The inlet end of the ferrule shall be lead burned to the lead pipe.

When lead waste or vent pipes are connected to acid-resisting iron or steel pipe with regulation standard pipe threads, the lead pipe shall be burned to cast hard lead bushings or nipples. When brass nipples or brass bushings are used, the lead pipe shall extend through them with lead-burned joint used on inlet and outlet end. Lead-to-lead flange joints may also be used.

HANGERS AND SUPPORTS

Piping shall be installed without undue strains and stresses and provision made for expansion, contraction and structural settlement in accordance with the following recommendations:

VERTICAL LEAD PIPE shall be supported at intervals not to exceed 4 ft. Flanges, tacks or straps burned to pipe shall be used.

HORIZONTAL LEAD PIPE shall be supported by angle or channel irons, heavy sheet-metal troughs, wood strips or otherwise, over its entire length.

HANGERS AND ANCHORS shall be of metal of sufficient strength to maintain their proportional share of pipe support and alignment and be securely attached to the building construction.

PIPING IN CONCRETE. All chemical laboratory piping shall, where construction permits, be placed or installed in chases or recesses which will permit access to the piping for repair or replacement.

Lead piping encased in concrete or masonry walls or floors shall be heavily coated with asphaltum paint.

LEAD SAFE PANS

Lead safe pans shall be installed in accordance with Lead Industries Association Specification for Lead Shower and Safe Pans (Lead Building Construction Bulletin No. 2).

SAFE WASTES, when used in place of weep holes in floor drain, shall be 1-in. lead pipe, considered as an indirect waste, and discharge over a water-supplied service sink or floor drain.

LEAD-LINED NEUTRALIZING BASIN

Lead linings for neutralizing basins or dilution tanks for chemical laboratory waste in buildings shall be of at least 12-lb. sheet lead with lead-burned joints.

LEAD OR LEAD-LINED FUME HOODS AND DUCTS

Fume hoods and ducts shall be constructed of at least 6-lb. sheet lead supported in an angle iron framework. Sheet metal having a bonded lead coating thickness of lead of at least 1/16 in. may also be used.