LESTER V. CRALLEY
PITTSBURGH OFFICE - 7

TO MR. F. C. IRVING, JR.
PITTSBURGH OFFICE - 29

May 3, 1972

RE: ALLIED PRODUCTS GROUP

The attached letters are being sent to the captioned group for their information and file.

December 23, 1971 - Re: ~~Emergency~~ Standard for Exposure to Asbestos Dust

April 17, 1972 - Re: Industrial Hygiene Newsletter - Asbestos Dust Exposures

Lester V. Cralley

LVC:mh

Attachments

cc: R.W. Adams/R. Kohler, Alcas Cutlery Corp.
F.D. Koran/E.A. Moats, Tifton Aluminum Co., Inc.
A.P. LeClair, Jr./J.A. Elliott, H.C. Products Company
J.L. McKinley/R.B. Kempton, Rea Magnet Wire Co., Inc.
R.F. Butler/D. Trudel, Permanent Mold Division, Cleveland Works
J.W. Anderson, ABP, Inc.
A.C. Sheldon/W.J. Koopman, ACPC
J.W. Warnock, ACPC, Marshall
J.S. Hamilton/J.J. Thimons, Wear-Ever Aluminum, Inc.
R.C. Wilson, LeFiell Sport Products, Inc.
D.D. Rhoads/W.A. Coward, Lincoln Manufacturing Co., Inc.
R.C. Dean, Frigidome Division
J.C. Bates, Pittsburgh - 22



Environmental Sciences Laboratory

of The City University of New York

INSULATION HYGIENE PROGRESS REPORTS

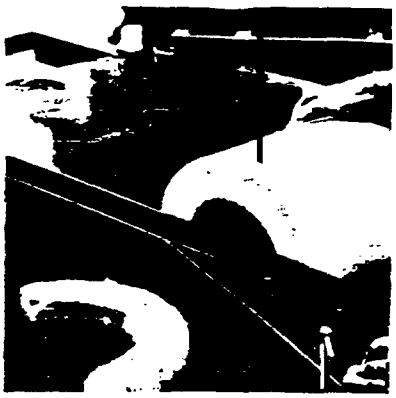
FROM THE INSULATION INDUSTRY HYGIENE RESEARCH PROGRAM

Irving J. Selikoff, M.D., Program Director

Vol. 3, No. 4 Winter 1971



Dust produced by use of an unventilated band saw. Without the back lighting used here, much of the dust would not be visible.



Cutting pipe with band saw equipped with high-velocity, low-volume exhaust system. Compare absence of any airborne dust with that shown in uncontrolled cutting (picture left.)

Shipyard Procedures Guide Helps All Insulation Men

The Winter 1970 issue of Insulation Hygiene Progress Reports announced a joint effort by the Insulation Industry Hygiene Research Program, the U.S. Navy, the Department of Labor, and insulation manufacturers and contractors to control shipyard asbestos dust exposures.

As part of that effort, Duncan A. Holaday and William B. Reitze of the IIHRP prepared a procedures guide for shipyard insulation application and removal. Because of its relevance to all insulation work, portions of it are given in this issue of Insulation Hygiene Progress Reports.

A complete report was presented by the authors at the International Symposium on Safety and Health in Shipbuilding and Ship Repairing, at Helsinki, Finland, on August 30, 1971.

by Duncan A. Holaday and William B. Reitze

The general goal in all insulation work should be to maintain a clean environment.

Measurements of concentrations of asbestos fibers ("dust counts") in the atmosphere can be used to identify sources of contamination and to point out deficiencies in control methods. Primary reliance for control of exposures, however, must be placed on *faithful observance of operating rules.*

Control of Asbestos-Containing Dusts by Use of Substitute Materials

Substitution of materials containing reduced proportions of asbestos or no asbestos at all, is becoming more common in ship construction. Before a material is substituted for asbestos, however, two questions must be carefully considered:

a. Has the substitute material been tested? If not, it may turn out to be of the same or greater hazard than the material of known hazard. This sort of thing has happened in other environmental situations.

b. Does the new material meet engineering specifications and will it perform adequately under conditions of use?

Materials containing reduced amounts of asbestos have been used in the following applications:

a. Blanket and pad filling

Substitution of the proper types of other pad fillers not only reduces asbestos dust during fabrication and installation but also tends to lessen the problems during subsequent "rip-out". Additionally, asbestos cloth which has been treated with a dust suppressant is available and its use should also be encouraged. There are reports that much less dust will be produced.

b. Pipe covering and block

Serious consideration should be given to those products containing lower amounts of asbestos fiber. Several British firms have introduced asbestos-free calcium silicate block and pipe covering. To date, however, this material has not been adequately evaluated in the United States to determine how it will perform in use.

Here Are Some of Many Ways to Reduce Dust

Reduction of Dust by Changes in Work Methods

a. Mixing Asbestos Mortar

This operation has usually been done at the job site. While the time spent in mixing is quite short, considerable dust is produced. A tested method of control is to mix the mortar dockside under controlled conditions and package the mixed mortar in several containers for transportation to the job site.

Mortar is also available packaged

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Dampening fibrous glass blanket filler before cutting. Note lateral draft hood in which fabrication is done.

(Continued from second page)

dropcloth is placed on the deck under the equipment.

f. Fabrication of Pads and Blankets

Pads for valves and machinery should be fabricated in the shop whenever possible. Amosite has been largely replaced by fibrous glass filling with covers of an asbestos cloth which has been treated with dust suppressants. As an effective means for suppressing dust dispersion and collection, the fibrous glass blanket is unrolled, dampened and rerolled. This procedure insures that all the blanket will be dampened. The blanket and asbestos cloth shapes are cut in the lateral draft booth.

g. Housekeeping and Clean-up

Essential parts of a dust control program are housekeeping and clean-up procedures. Meticulous attention must be given to restricting the spread of dust and larger wastes. Use of a dropcloth under a work area vividly illustrates how much waste would be distributed over the general area or to lower decks if one were not used.

Areas should be cleaned up at the lunch break and the end of each shift, using an industrial vacuum cleaner to collect dust and small scrap.

In all possible instances, workmen should clean up their own areas. Where work rules prohibit this, the clean-up crew should be under the direction and supervision of the insulation foreman to insure that proper attention is given to this important subject.

Reduction of Dusts by Use of Local Exhaust Ventilation

a. Ventilation of Large Power Tools—Band Saws

Extensive use of band saws both in dockside fabrication shops and, on board larger ships such as aircraft carriers make emissions from band saws a major source of asbestos dust. Control devices for such saws have been known for years and are relatively simple. Conventional low-velocity, high-volume systems, using a negative pressure baghouse for air cleaning, are practical in a fixed installation fabrication shop.

Because some degree of portability is desirable in a temporary shipboard fabrication area, a high-velocity, low-volume dust collection unit is desirable for



Portable down-draft table developed by Puget Sound Naval Shipyard for use shipboard. Lightweight industrial vacuum cleaner is used as the air mover. Note plastic bag for scrap and dropcloth on deck.

such use; it may also be suitable for fixed installations. The air mover is an industrial vacuum cleaner which pulls about 50 cubic feet of air per minute past the saw blade at velocity of more than 10,000 feet per minute. This system is a very efficient dust collector. Units such as this can also be designed to control dusts produced by table saws and gang saws.

b. Ventilation of Hand Power Tools

High-velocity, low-volume collection systems control dust emissions from most small power tools adequately. Saber saws for cutting pipe covering and rotary saws for cutting asbestos cement board are well controlled with these systems.

Control of Number of Workmen Exposed

a. Scheduling of Insulation Work

Standard industrial hygiene practices call for insolating operations which contaminate the atmosphere with toxic materials. Areas where insulation work is being done under conditions in which dust might be created should be isolated by non-flammable curtains or other means. Whenever possible, work should be scheduled to minimize the numbers of other tradesmen in the area. Ship construction operations are more readily scheduled than are ship repair or ship-breaking jobs. However, every effort should be made to keep the number of men exposed at a minimum. In particular, rip-out of old insulation should always be isolated and, if necessary, performed on an off-shift. Trained workmen supplied with proper protective equipment should always be used for rip-out work and it should be scheduled for rapid completion.

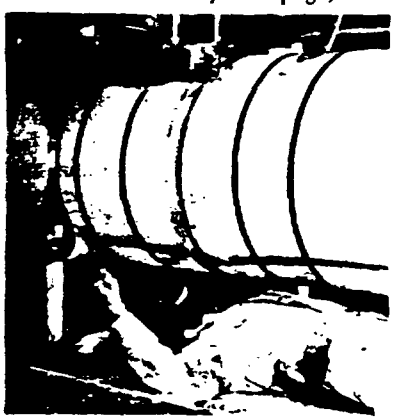
Personal Protective Equipment

In addition to dust suppression and dust control procedures, personal protective equipment is often necessary to reduce exposure and limit the spread of contamination. The equipment described below is used in control programs.

a. Protective Clothing

Protective clothing is required to keep contamination confined to the work areas. One method is to issue disposable coveralls which can be removed when leaving the

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Use of dropcloth to contain wastes and facilitate clean-up.

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