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Gold Bond

NATIONAL GYPSUM COMPANY

EXECUTIVE OFFICES • 325 DELAWARE AVENUE • BUFFALO, NEW YORK 14202

May 11, 1974

PLAINTIFF'S
EXHIBIT

WRG-601

Mr. Thomas Eagan
W. R. Grace Company
Construction Products Division
62 Whettemore Avenue
Cambridge, Massachusetts 02140

Dear Tom:

We recently ran across this article and thought you may
find it of interest.

Best personal regards.

Sincerely yours,



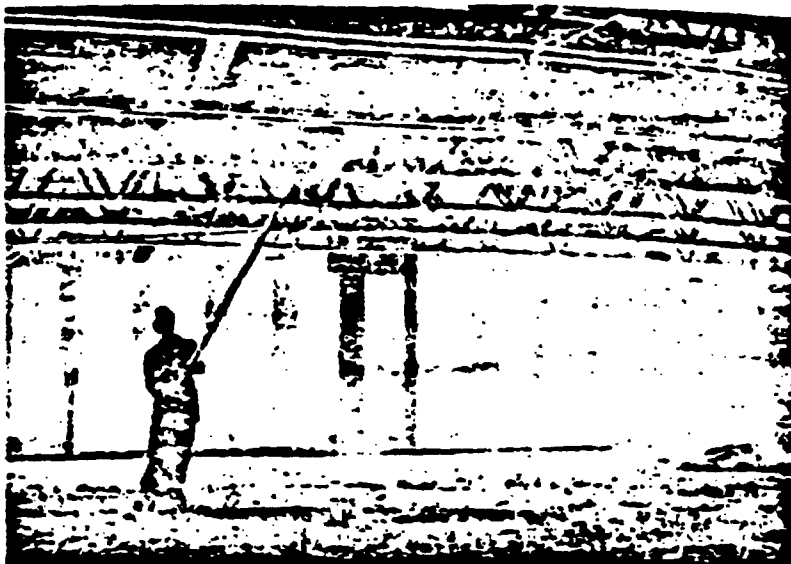
D. L. Shank
Industrial Sales Manager

DLS:ak

cc: Mr. Joseph Schachter, Director of Purchases
W. R. Grace Company
Construction Products Division
62 Whettemore Avenue
Cambridge, Massachusetts 02140

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PREVENTION IN THE INSULATION INDUSTRY



Only 20% of insulator workers surveyed in the insulation industry used always a mask on a dusty job, and about 30% never used such protection.

Applying spray insulation generates a respiratory hazard.

This is one of the conclusions in an exhaustive study by Dr. Irving J. Selikoff on preventive measures in the insulation industry. He is Director of the Environmental Science Laboratory, Mount Sinai School of Medicine in New York and an expert in Asbestosis and other forms of occupational lung diseases.

This study is the United States' first cooperative effort by an international labor union (International Association of Heat and Frost Insulators and Asbestos Workers), industry and Sprayed Mineral Fiber Manufacturers Association (Johns-Manville Corporation), medical science (Environmental Science Laboratory at Mount Sinai School of Medicine) and government (U.S. Public Health Service), — to conduct a preventive hygiene research program for insulation workers.

PREVENTION OF DUST DAMAGES

The Program has three major goals: the prevention of dust formation; the control and limitation of dusts that are unavoidable; and preventing inhalation of dust by those exposed to it.

The main material which has to be controlled in the work of insulating workers, is *asbestos*. Asbestos is the name given to a series of minerals composed of silicates of magnesium and iron. It is silky and fibrous in form, and damage by inhaling depends largely on the size of the fibers. Dr. Johnstone concluded from clinical investigations that workers exposed even to high concentrations of extremely fine asbestos dust did not suffer asbestosis, a lung condition caused by the inhalation of asbestos dust.

For all kinds of working with asbestos however, protection is needed. More than 50% of asbestos used in industry goes into the construction industry. Most of this kind of asbestos is "locked in", — bound with cement or plastics so that there is hardly any release of asbestos fiber.

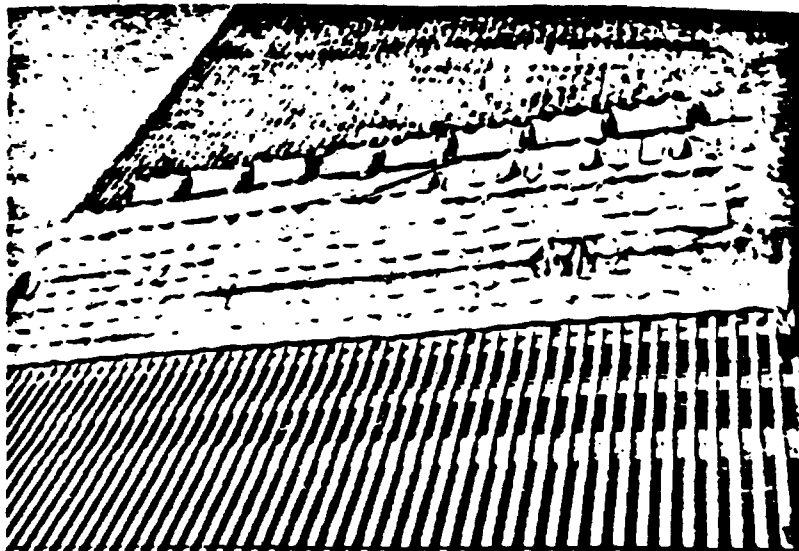
Attention therefore was turned to those insulating products which are capable of generating dust on the job — through handling, sawing, fabricating, applying, mixing, as with loose asbestos cement, spraying, and waste disposal. And the primary concern of the study was with the insulation worker. If his exposure is brought under control, problems of other workers handling asbestos and similar dust-producing materials will be resolved automatically.

NATURE OF WORK

Asbestos and insulation workers in the United States are estimated at about 22,000. They are expected to increase moderately through the 1970's. Their principal work is to cover pipes, boilers, and other related equipment with insulating materials such as cork, felt, asbestos, fiberglass, polyurethane, and magnesite. These materials are installed by pasting, wiring, taping, stud-welding, spraying, or other methods. Insulating materials are used to retain heat and thus to save fuel. On the other hand insulation of piping in refrigeration systems prevents heat absorption.

In Dr. Selikoff's study *immediate protection against dust inhalation* was one of the most urgent problems. Since so many workers do not use masks at all working times, or ever, he turned his efforts toward developing a new type of respirator. It should be effective against the fibers and dusts generated in insulating work, of course. But still more important was it to create a respirator that would meet the workers' requirements of comfort, convenience and good vision.

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Canvas enclosures to contain emissions from spray insulation. The building shown is the World Trade Center, New York City.

This work has not yet been completed. But Dr. Selikoff is confident that the result will be a respirator that will be more acceptable to insulation workers and that may be adopted for many other occupations where breathing masks are required, but too seldom worn. He rightly quotes a word by Dr. Cuyler Hammond: "It is far better to have a mask that is 100% used, even if not fully effective, than one that is fully effective but never used!"

CONTROL OF DUST — PRODUCTION

What Dr. Selikoff and his associates aim to achieve is a working environment in which dusts are so fully controlled that respirators may never be necessary. One difficulty has been that in installing insulation it is necessary to mix some asbestos cement on the job site. This is spread and applied to seal joints and to fill in corners where pre-fabricated material is not practical. At present, two different methods of packing an asbestos-cement mixture are tried out by the Selikoff-group. By these methods the water can be poured into the container and wetted down into the so-called "mud" without generating dust, — two new methods which seem to work.

Many insulation fittings are packed and shipped in containers that are opened at the job site. These fittings are shedding during the handling, so that the containers are emitting dusts and the fittings continue to shed during handling. A method has been developed of spraying these fittings with a wax-like substance before packaging. This method, developed at the Johns-Manville Research and Engineering Center, prevents the dust from shaking loose. It has, therefore, provided a new means by which generation of dust can be prevented — the ultimate goal of preventive industrial medicine.

There is still need for quite some sawing on the insulating job site — either with hand or power saws, which do not have dust collectors. Now pilot models of power saws have been constructed with suction attachments that are nearly 100% efficient in dust prevention.

APPLYING SAFETY MEASURES TO DAILY WORKING PROCEDURES

New methods and safety techniques are of value only if they are applied for daily working procedures. Dr. Selikoff got excellent response from contractors and contracting groups, and the participation of union members is assured. Each union member contributes \$10 to help support the program. Now a quarterly report of progress is published which is sent to all people and organizations interested in the problem.

"This partnership for research into prevention of the occupational health hazards of the insulating industry", says Dr. Selikoff, "funded by labor, industry, science and government — has proved useful. It is possible that it will provide a key to similar partnerships in other industries where occupational health problems exist."

Since treatment for the asbestos diseases is still a difficult problem, every effort should be made to decrease exposures to safe levels. Dr. W. D. Norwood, of the Council on Occupational Health of the "American Medical Association", points out that exposure in the asbestos and insulating industries should be minimized.

- through improved working conditions;
- through medical supervision of workers, including health education;
- by substitution of less-toxic materials where possible;
- through enclosure ventilation and respiratory protective devices which keep exposures as near zero as possible.

The threshold limit for asbestos proposed for 1970 by the American Conference of Governmental Industrial Hygienists is five fibers (length 5 micron) per milliliter of air, in the work place. In England fibers shorter than 2.5 microns are considered to bring no danger.

The earliest symptom of asbestosis is shortness of breath. All asbestos workers, according to Dr. Norwood, should have annual x-ray films of the chest and pulmonary function tests. They should not smoke cigarettes, and with the early development of asbestosis should either be encouraged to change to other work, or exposures should be extremely low.