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Mechanical Packings Association

Mechanical Packings Association requested Sheckler to speak on health problems of asbestos, p. 13 of internal J-M report by Jackson and Sheckler, June 1, 1970.

419

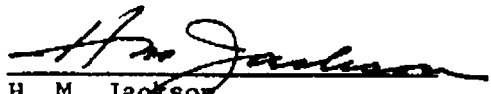
INDUSTRIAL RELATIONS DEPARTMENT
HEALTH RESEARCH REPORT
JUNE 1, 1970

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This report defines the status of Health Research Programs, including medical, research, and scientific studies, plus other related projects, in which Johns-Manville is actively participating.


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INDEX

	<u>Page</u>
Fibrous Dust Study	3
Epidemiological Study of the Canadian General Population	3
Establish Library of World-Wide Asbestos Research and Health Studies	4
Asbestos Industry Study	4
Insulation Industry Hygiene Research Program	5
Fibrous Glass and Mineral Wool Industry Study	5
Bioeffects of Fibrous Glass Study	6
Epidemiological Study of J-M Retired Employees	6
Exposure of Insulation Workers to Airborne Fibrous Glass	7
Evaluation of Fibrous Glass Lined Air Transmission Systems	7
Epidemiological Study - New Orleans	7
General Population Human Pulmonary Tissue Study	8
Respirator Development	8
Biological Effects of Modified Inorganic Fibrous Microparticulates	8-9
Fibrous Particles in Ambient Air	9
Sheet Metal Workers Occupational Exposures to Fibrous Glass	10
Roentgenographic Follow-up of Workers in the Diatomite Industry	10
Relationship Between the Dimension of Fibers and Their Ability to Produce Pulmonary Tissue Response	10
Meetings, Conferences and General Information	11-12-13

HEALTH RESEARCH REPORT

The following is a progress report of health research studies in which Johns-Manville is actively participating:

FIBROUS DUST STUDY INDUSTRIAL HYGIENE FOUNDATION OF AMERICA

This study involves the investigation of the health hazards of four various types of asbestos: chrysotile, amosite, crocidolite and synthetic. In addition, fibrous glass, mineral wool, and some organic fibers are being studied.

The portion of the study related to determining a comparative pathogenicity of the fibrous dusts has been completed. A paper entitled, "The Pulmonary Response to Fibrous Dusts of Diverse Compositions" by Paul Gross, M.D., Robert T. P. deTreville, M.D., Lewis J. Cralley, Ph.D., William T. Granquist, Ph.D., and F. L. Pundsack, Ph.D., has been published in the March/April issue of the American Industrial Hygiene Association Journal.

The study of the inflammatory and onogenic components of the determination of the locus of pathogenicity of asbestos dust continues in progress since the animals will not be sacrificed but will live out their lives.

EPIDEMIOLOGICAL STUDY OF THE CANADIAN GENERAL POPULATION INSTITUTE OF OCCUPATIONAL AND ENVIRONMENTAL HEALTH

This study proposed to relate the health status of asbestos-exposed population to the non-exposed population.

In addition to the Johannesburg Conference paper, Dr. MacDonald made a presentation to the QAMA and recently a similar presentation at Thetford to a group of management, labor and press representatives. Continuation of the study, approved by QAMA, will attempt to develop a basis for a Threshold Limit Value through a more definitive review of individual exposure histories and bronchogenic cancer involvement.

HEALTH RESEARCH REPORT

ESTABLISH LIBRARY OF WORLD-WIDE ASBESTOS
RESEARCH AND HEALTH STUDIES
INSTITUTE OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH

This project is designed to assemble information on world-wide asbestos research and health studies for future reference and distribution upon request.

Gathering, codifying and indexing world-wide asbestos information is being continued by Dr. Pelnar.

ASBESTOS INDUSTRY STUDY
UNITED STATES PUBLIC HEALTH SERVICE

This is a 7 to 10 year environmental, clinical and epidemiological study of workers exposed to asbestos. This study was initiated in January 1963.

Follow-up environmental studies in Asbestos-Cement and Insulation plants are presently being conducted. Medical studies of the Textile personnel have been completed at Manville Plant and will be completed throughout the industry by the end of the year.

A paper entitled, "Public Health Service Study of Asbestos Processing Workers - Progress Report" by H. E. Ayer, C. V. Oster, R. N. Ligo, M.D., R. B. Weidner, H. W. Raymond, M.D., and R. M. Knight, M.D., was presented at the American Industrial Hygiene Association Conference on May 14, 1970.

HEALTH RESEARCH REPORT

INSULATION INDUSTRY HYGIENE RESEARCH PROGRAM
MT. SINAI ENVIRONMENTAL SCIENCES LABORATORY

This is a combined industrial hygiene and preventive engineering research program designed to develop improved methods that will minimize exposures of insulation workers to dust and fumes encountered in their jobs.

Considerable effort is being devoted to assisting New York City authorities and the Sprayed Insulation Association to negotiate practical regulations for the application of asbestos-containing sprays for fireproofing steel and lining plenums. New York City will enforce regulations rigorously. The ultimate long-term goal appears to be elimination of asbestos from sprays for coating plenums.

Task forces have concentrated on (1) improving work practices and (2) studying tools for sawing insulation.

Newsletters reporting progress of the work to-date are being published and distributed to interested employers in contractors associations as well as to the membership of the Heat, Frost, Insulation and Asbestos Workers Union. A recent publication entitled, "Partnership for Prevention", has also been forwarded to the same distribution as the newsletters.

FIBROUS GLASS AND MINERAL WOOL INDUSTRY STUDY
UNITED STATES PUBLIC HEALTH SERVICE

This is a 7 to 10 year environmental, clinical and epidemiological study of workers exposed to fibrous glass and mineral wool. This study was initiated in March 1968.

A paper entitled, "Exposure to Fibers in the Manufacture of Fibrous Glass", by D. L. Johnson, J. J. Healey, H. E. Ayer, and J. R. Lynch, has been published in the American Industrial Hygiene Association Journal. This report indicates that the respirable size dust levels of the fibrous glass sampled were relatively low, and there was no apparent health hazard related to fibrous glass dust in the manufacturing insulation.

HEALTH RESEARCH REPORT

**BIOEFFECTS OF FIBROUS GLASS STUDY
INDUSTRIAL HYGIENE FOUNDATION OF AMERICA**

The purpose of this study is to provide current and definitive knowledge of the bioeffects of fibrous glass on pulmonary function, emphysema, and human pulmonary tissue. It is sponsored by PPG Industries, Owens-Corning Fiberglas Corp., Certain-teed - St. Gobain, and Johns-Manville.

Pathological studies are well underway. The pulmonary function studies have been initiated.

Autopsy material of people with long employment in a fibrous glass manufacturing plant has been obtained. Pathological studies of this material will be included in the final report of this research.

**EPIDEMIOLOGICAL STUDY OF J-M RETIRED EMPLOYEES
SCHOOL OF PUBLIC HEALTH
UNIVERSITY OF PITTSBURGH**

This is an epidemiological study to determine and analyze the life span, causes of death, and possible causal relationship to work exposures, of J-M retired employees. Comparisons will be made between this group and similar age groups in the general population.

The initial report covering operations which utilize silica, asbestos, diatomaceous earth as raw materials has been received and indicates that while the over-all mortality rate is comparable to that of the general population, there are certain types of causes of death which are higher than those found in the general population.

The study is being continued to include data on other manufacturing and sales locations.

HEALTH RESEARCH REPORT

EXPOSURE OF INSULATION WORKERS TO AIRBORNE FIBROUS GLASS UNIVERSITY OF CALIFORNIA

This is a study to define qualitatively and quantitatively the airborne concentrations of fibrous glass in the breathing zones of workers engaged in fabrication, application, finishing and other operations involved in installation of prefabrication and other fibrous glass insulation materials.

This study is being coordinated by the NIMA Health and Duct Committees. A draft of a paper, "Exposure of Insulation Workers to Airborne Fibrous Glass", by W. C. Cooper, M.D., J.L. Balzer, Ph.D., and D. P. Fowler, has been written and reviewed for publication in the near future.

EVALUATION OF FIBROUS GLASS LINED AIR TRANSMISSION SYSTEMS UNIVERSITY OF CALIFORNIA

This is a study to obtain quantitative estimates of amounts of fibrous glass introduced into living and working areas from ventilation or heating ducts lined with fibrous glass.

This study is being coordinated by the NIMA Health and Duct Committees.

A draft of a paper entitled, "Airborne Fibers in Relation to Fibrous Glass Lined Air Transmission Systems", by W.C. Cooper, M.D., J. L. Balzer, Ph.D., and D. P. Fowler, has been reviewed for publication in the near future.

EPIDEMIOLOGICAL STUDY - NEW ORLEANS TULANE UNIVERSITY

This two-year study of the health effects related to asbestos exposure in industry was initiated in December 1969. The physical examination portion of the program involving personnel in both national and J-M plants in the New Orleans area is proceeding on schedule. The collation and analysis of employment and exposure records will be initiated within the next two months.

HEALTH RESEARCH REPORT

GENERAL POPULATION HUMAN PULMONARY TISSUE STUDY
INDUSTRIAL HYGIENE FOUNDATION

The Industrial Hygiene Foundation has submitted a proposal to the QAMA Scientific Advisory Committee concerning the central core identification of ferruginous bodies found in general population autopsies.

The QAMA Scientific Advisory Committee has made initial review of the proposal and further discussions will be scheduled with the Industrial Hygiene Foundation.

RESPIRATOR DEVELOPMENT
JOHNS-MANVILLE RESEARCH

Work is continuing in our cooperative development program with the Willson Products Company.

The pilot plant equipment for forming respirators has validated the practicality of the proposed manufacturing process. Initial tests indicate the problem of filter efficiency in high humidity can be solved with confirmatory tests to be made shortly by Willson.

Specifications for a full-scale production unit at Willson will be prepared the week of June 1.

BIOLOGICAL EFFECTS OF MODIFIED INORGANIC
FIBROUS MICROPARTICULATES
MT. SINAI ENVIRONMENTAL SCIENCES LABORATORY

This two-year program, initiated in October 1969, will investigate significant variations of biological effects of fibrous microparticulates that may occur following alterations on their surface and other physical-chemical properties. In vitro test systems will be used to identify the effect of modifications of several materials including chrysotile, crocidolite, glass-MICRO-FIBERS, MICRO-QUARTZ.

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HEALTH RESEARCH REPORT

BIOLOGICAL EFFECTS OF MODIFIED INORGANIC
FIBROUS MICROPARTICULATES
MT. SINAI ENVIRONMENTAL SCIENCES LABORATORY (Contd.)

The initial program on hemolytic effects of asbestos and other materials on sheep and horse cells has been completed. The action of inhibitors can be explained based on surface chemistry of the fibers. The eventual significance of the hemolysis phase of the program is not yet clear.

Initial work on the effect of asbestos on human monocytes indicates the growth pattern of the cells is affected. No change was observed in enzyme production or in the chromosomes. As soon as techniques are confirmed, experiments with other fibers and fiber modifications will be initiated.

A status report was presented by Dr. Selikoff and his staff at the Research Center on May 7, 1970.

FIBROUS PARTICLES IN AMBIENT AIR
UNIVERSITY OF CALIFORNIA

This is a study to determine the description of the type and concentration of fibrous glass particles to be found in ambient air. Secondary objectives are: (1) description of possible sources of fibrous glass, in terms of those general categories of human and natural activities and processes which appear to generate fibrous glass particles, with relative importance of each source to be assigned, in relation to the type of glass fiber produced, and, (2) description of the natural conditions which favor the presence of fibrous glass in the air, comparing the concentrations of fibers to the concentration of other particulates, and types of glass fibers in air with each other.

This study is being coordinated by the NIMA Health and Duct Committees. The protocol has been reviewed and approved.

HEALTH RESEARCH REPORT

SHEET METAL WORKERS OCCUPATIONAL EXPOSURES TO FIBROUS GLASS
UNIVERSITY OF CALIFORNIA

This is a study to define qualitatively and quantitatively the airborne concentrations of fibrous glass in the breathing zones of sheet metal workers engaged in the fabrication, application, finishing, and other operations involved in the installation of air transmission systems containing fibrous glass.

This study is being coordinated by the NIMA Health and Duct Committees. The protocol has been reviewed and approved.

ROENTGENOGRAPHIC FOLLOW-UP OF WORKERS IN THE DIATOMITE INDUSTRY
UNIVERSITY OF CALIFORNIA
UNITED STATES PUBLIC HEALTH SERVICE

This study was started in 1953-54 by the USPHS. The project included 869 workers in the diatomite industry. Roentgenographic follow-up of these workers have been conducted, and the most recent concluded by W. C. Cooper, M.D., in 1970.

A paper entitled, "15 Year Follow-up of Pneumoconiosis in the Diatomite Industry", was presented by W. C. Cooper, M.D., at the American Industrial Hygiene Conference on May 14, 1970. The paper will be published in the near future.

RELATIONSHIP BETWEEN THE DIMENSION OF FIBERS AND THEIR ABILITY
TO PRODUCE PULMONARY TISSUE RESPONSE
ST. LUKE'S HOSPITAL, CLEVELAND, OHIO

This is a study to further explore the relationship between the dimension of fibers and their ability to produce pulmonary tissue response.

This investigation will be an important contribution to knowledge of the inter-action of fibers with tissue and it will lead ultimately to better control of those inter-actions.

This study is being sponsored by Johns-Manville. The protocol has been reviewed and approved.

HEALTH RESEARCH REPORT

MEETINGS, CONFERENCES AND GENERAL INFORMATION

Asbestos Textile Institute -

The ATI Environmental Study Committee is actively reviewing and circulating medical and scientific literature concerning fibrous materials. This Committee acts in an advisory capacity to the Board of Managers on matters concerning environmental health.

The ATI Air Hygiene Committee is exchanging health and safety information, and engineering methods for improving dust control.

Progress is being made on the project to write a historical report on the health and safety program of the ATI.

Assignments have been made to write a "Safe Practices Manual for Fabricating and Handling Asbestos Textiles", and also to write a revision of the manual "Method for Determining Asbestos Dust Concentration".

Asbestos Cement Products Association -

Final draft of the brochure "Recommended Practices for Fabricating, Handling and Applying Asbestos Cement Products", has been completed. The brochure will be printed and distributed to member companies in the near future.

C. L. Sheckler is continuing to keep the Health and Safety Committee informed on legislation, litigation, and medical-scientific activities concerning the health aspects of fibrous materials.

National Insulation Manufacturers Association -

The University of Cincinnati has completed Phase 2 of a study entitled, "Erosion of Fibers from Installed Fibrous Glass Ducts", by Dr. Cholak. The University of California has completed studies on "Fibrous Glass Lined Air Transmissions", and "Exposure of Insulation Workers to Airborne Fibrous Glass". The drafts of these three studies have been reviewed and the papers are being prepared for publication in the medical journals.

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HEALTH RESEARCH REPORT

MEETING, CONFERENCES AND GENERAL INFORMATION

National Insulation Manufacturers Association (Contd.)

Protocols for two studies "Sheet Metal Workers Occupational Exposure to Fibrous Glass", and, "Fibrous Particles in Ambient Air" have been approved and the work will begin at the University of California in the near future.

Legislation has been introduced in five States, including, Kansas, Massachusetts, California, Kentucky, and Florida, to eliminate fiber glass, asbestos, and similar fibrous materials from air-conditioning and heating ducts. This legislation was introduced at the request of the Heat, Frost, Insulation and Asbestos Workers Union. The basis for the legislative action by this union, although using public health and indoor air pollution as their reason, is a work jurisdictional dispute between the Asbestos Workers and the Sheet Metal Workers. The NIMA Education and Legislation Committee has been successful in appearing before the legislators of the five States in opposition to these Bills. The Bills in all five States have been defeated.

The Education and Legislation Committee is currently preparing a fiber glass insulation brochure concerning environmental health that can be used to answer questions in the field by salesmen and engineers.

Perlite Institute -

The Health and Safety Committee met with members of the Industrial Hygiene Foundation of America to discuss the need for future health research studies of Perlite dust.

Consideration is being given to the suggestions from the Industrial Hygiene Foundation, and a meeting is scheduled to discuss this matter on June 8th.

Consideration is also being given to establishing an industry-wide Threshold Limit Value for Perlite dust.

HEALTH RESEARCH REPORT

MEETINGS, CONFERENCES AND GENERAL INFORMATION

Mechanical Packings Association -

C. L. Sheckler met with this group on April 23rd and briefed them on the subject of industrial health related to handling asbestos and asbestos products.