PLAINTIFF'S EXHIBIT JM410
Blumberg No. 6113

MINUTES

of the

SPRING MEETING

NATIONAL INSULATION MANUFACTURER'S ASSOCIATION

Hot Springs, Va. April 26, 1971

The meeting was called to order at 9:00 A.M. by R.S. Naylor, with the following in attendance:

Certain-Teed/St. Gobain Valley Forge, Pa.	B. Leeman W.W. Pitkin
Johns-Manville Sales Corp. New York, N. Y.	R.E. Naylor
Owens-Corning Fiberglas Corp. Toledo, Ohio	J.P. Kern D. Glosser
Pittsburgh Corning Corp. Pittsburgh, Pa.	J.H. Price, Jr.
PPG Industries Pittsburgh, Pa.	J. Brownell
Cadwalader, Wickersham & Taft NIMA	J. Boyer J.M. Barnhart

Approval of Minutes

A motion was made, seconded, and passed that the Minutes of the Annual Meeting of October 4, 1970, as bulletined by the Association be approved.

Traffic Committee Report

In the Chairman's absence, J.M. Barnhart reported as follows:

Since our report of September 10, 1970, the National Classification Board has postponed establishment of Class 60, minimum weight 18,000 lbs., on mineral wool, fill and have allowed Class 50, minimum weight 18,000 lbs, and Class 37½, minimum weight 24,000 lbs.

We assume all members are now aware the Interstate Commerce Commission has granted increases to the rail carriers which are to become effective April 12. The increases will amount to approximately 11.8% nationally as compared to the rates in effect on November 1 of last year.

At the request of some of the membership, we protested a proposal by the southern motor carriers to establish a rate of Class 300B AQ of any quantity on mineral wool, batts originating at several Georgia points which we were successful in defeating.

The rail carriers proposed during November of last year to exempt insulating material from the free lighterage rules in effect in New York. We protested the proposal but it was recommended by the carriers despite our protest.

On November 25, 1970, the southwestern and middlewestern rail carriers sought to increase rates on insulating material by 25%. Public hearing was held on the proposal February 3, 1971. At that time we protested action violently on three bases: (1) It would destroy the ability of single plant producers to compete with multiple plant operators already located in the southwest or middlewest. (2) The increase was wholly without justification because of the nature of the product being transported from a value standpoint. (3) The timing of the proposal left it wholly without justification because it was in common of the action the Interstate Commerce Commission was going to take with regard to rail freight rates generally. After the hearing, the rail carriers announced they were turning the proposal over to the Research Committee for further study and we have heard nothing since.

For the next six months we expect there will be considerable action on the part of the motor carriers to increase rates generally and on an individual product basis in an effort to recoup the wage increases which will become effective every six months. There are a great many people who believe that no sooner than wage and rule settlements are made with the UTU, the rail carriers will immediately begin action to pave the way for a further increase to become effective early in 1972. We sincerely request all members ask their traffic departments to advise the Chairman of the Traffic Committee of any published proposal which they feel could have an effect nationally upon the industry. While we have tried to keep all members of the Committee advised of this type proposal, it is an extremely difficult job and we would appreciate any help we can get.

Statistical Committee Report

In the Chairman's absence, J.M. Barnhart reported that:

1. The membership had been canvassed and a list of trade names had been consolidated and distributed to the members.

2. The statistical reporting forms for the duct liners and duct systems had been revised to a single page reporting form.

J. Kern is to submit a suggested report as it pertains to duct liner

Technical & Research Committee Report

J.M. Barnhart reported as follows:

Since the October 3, 1970, NIMA Annual Meeting, the technical activities have included the following:

January 20, 1971 - NYSDPW, Albany, New York

This Agency was visited for the purpose of ascertaining whether any major revisions are to be considered to the State Standard Specification.

March 2,3,4,5 - ASTM E-S, Atlanta, Georgia

This Committee met for the purpose of discussing subjects as they relate to give tests of materials and construction.

March 26, 1971 - T & R Committee, N.Y., N.Y.

The Subcommittees met and discussed the following subjects:

1. Suggested Revisions to HH-I-558.
2. Acoustical Performance of Duct Liners & Duct Systems.
3. Naval Shipboard Fire Risk Criteria.
4. Combined Military Spec.
5. Combined ASTM Spec. on Mineral Fiber Products.
6. Suggested Revisions to HH-I-545.
7. Industry Statement on Stress Corrosion.
8. Revisions to ASTM C-533.

March 28, 29, 30, 31 - ASTM C-16, Charleston, S.C.

The various subcommittees met for the purpose of discussing the following:

1. Stress Corrosion
2. ASTM C-533
3. Combined Mineral Fiber Specs
4. Inside Diameter of Pipe Insulation

April 1, 1971 - ASHRAE T.C. 2.4 - Charleston, S.C.

This Committee met for the purpose of discussing proposed revisions to the ASHRAE Guide, including "K" values for fibrous glass and calcium silicate type products.

Duct Systems Committee Report

J.M. Barnhart reported on the activities of the Committee in accordance with the Minutes of their Meetings which are attached hereto and made part of these Minutes.

Medical-Scientific Committee Report

In the Chairman's absence, J.M. Barnhart reported as follows:

This report deals primarily with the status of the various research projects and will be detailed by the research group and the studies being carried out.

INDUSTRIAL HEALTH FOUNDATION

Paul Gross, M.D.

1. The Pulmonary Reactions to High Concentrations of Fibrous Glass Dust. (A Preliminary Report)

   The paper reports the findings from Dr. Gross' long term, high concentration inhalation studies with fibrous glass on laboratory animals. It demonstrated that fibrous glass has no chronic adverse effect on the lungs of laboratory animals. This study was published in the Archives of Environmental Health, June 1970, Vol. 20, pages 696-704, by the Industrial Health Foundation.

2. The Lungs of Workers Exposed to Fiber Glass.

   This study demonstrated that long-term exposure to fiber glass of the type used for insulation causes no gross or microscopic pulmonary damage. This conclusion is based on post mortem study of the lungs of twenty fiber glass workers who had exposures to fibrous glass for periods ranging from 16 to 32 years. This study will be published in the Archives of Environmental Health.

Paul Gross, M.D. et al

Proposed Research

1. Submicron Fiber Bioeffects Research.

   This study was originally conceived in order to study bioeffects of fibrous glass particles less than 1.0 micron in diameter. Subsequent to the initial proposal it has been learned that the inhalation study Dr. Gross is currently completing (see "The Pulmonary Reactions to High Concentrations of Fibrous Glass Dust) was carried out using glass with an average diameter of less than 1 micron. It would appear that bioeffects submicron fiber in animals has already been demonstrated.

2. Hilar Lymph Node Fibrous Dust Study

   This study, which is currently underway, was undertaken to determine how much fibrous glass dust present in the lungs is transported to the hilar lymph nodes. The lymph nodes of sixteen fibrous glass workers and ten control lungs are being analyzed. Preliminary results suggest that there is 1/10 to 1/100 concentration of fibers in grams per dry tissue in the lymph node as compared to the lung tissue. These findings are reverse which is seen with mineral dust.

H. Michael Utidjian, M.D.

1. Fibrous Glass Manufacturing and Health - Report of an Epidemiological Study - Part I.*

* These papers were presented at the 35th Annual Meeting - Industrial Health Foundation, October 13-14, 1970, Pittsburgh, Pennsylvania, and will be published in Transaction Bulletin by the Industrial Health Foundation in 1971.

The results of the medical evaluation including pulmonary function testing of a randomly selected sample of employees, working in the world's oldest continually operating fibrous glass manufacturing plant, demonstrated no indication that the in-plant atmosphere caused an adverse health effect compared to a control group.

Robert T.P. deTreville, M.D., ScD., et al

1. Fibrous Glass Manufacturing and Health - Results of a Comprehensive Physiological Study - Part II.*

   This study, which involved careful medical evaluation including pulmonary diffusion tests, demonstrated no adverse health effect in long-term exposed employees as compared to a control population in the same plant mentioned previously.

* These papers were presented at the 35th Annual Meeting - Industrial Health Foundation, October 13-14, 1970, Pittsburgh, Pennsylvania, and will be published in Transaction Bulletin by the Industrial Health Foundation in 1971.

UNIVERSITY OF CALIFORNIA - BERKELEY

Douglas P. Fowler
J. Leroy Balzer, PhD.
W. Clark Cooper, M.D.

1. Exposure of Insulation Workers to Airborne Fibrous Glass.

   This study demonstrated that under actual working conditions, workers installing fibrous glass were exposed to only 1/10 of the threshold limit of airborne fibrous glass. At no time during the sampling period did airborne concentration exceed the threshold limit value. This study was published in the American Industrial Hygiene Association Journal, February 1971, Vol. 32, No. 32, pages 86-91.

W. Clark Cooper, M.D. et al

1. Fibrous Glass Lined Air Transmission System: An Assessment of Their Environmental Effect.

   This study demonstrated that there was a decrease in concentrations of fibrous glass in air after the air had passed through the fibrous glass lined air transmission systems. This study is to be published in the American Industrial Hygiene Association Journal.

2. Occupational Health Study of Sheet Metal Workers.

   This study defines the airborne concentrations of fibrous glass in the breathing zones of workers engaged in the fabrication, application, finishing and other operations involved in the installation of systems fabricated by sheet metal workers. Findings of this study are essentially the same as those in the "Exposure of Insulation Workers to Airborne Fibrous Glass". The study has been completed and an initial draft has been reviewed by the members of the Medical and Scientific Committee. Minor editorial changes were suggested. This paper will be published later this year.

3. Fibrous Particles in Ambient Air.

This paper delineates the concentration of fibrous glass found in ambient air in urban, suburban and remote locations. An initial draft has been reviewed by the Medical and Scientific Committee and returned to the author for complete re-editing. It is expected that this paper will be published later this year.

4. Electron Microscopic Study of Samples Collected in Ambient Air Study.

This study is, which is currently underway, designed to determine the character and concentration of fibrous glass particles too small to be seen by light microscopic methods. The study utilizes samples collected for the previous ambient air study which utilized light microscopic techniques. The study is currently being delayed two months to permit microscopists from the NIMA member companies to review slides to fiber identification will be assured. It is anticipated this study will be completed in the last quarter of 1971.

KETTERING LABORATORY

Jacob Cholak, ChE., et al

1. Erosion of Fibers from Installed Fibrous Glass Ducts.

This study demonstrated that there was no evidence to indicate erosion of fibers through air handling systems lined by fibrous glass. The study was published in the Archives of Environmental Health, February 1971, Vol. 22, pages 220-229.

U.S. PUBLIC HEALTH SERVICE

Lewis J. Cralley, PhD.

1. Epidemiological Study of Workers in Plants Manufacturing Fibrous Glass.

This study has been underway for approximately three years. Epidemiological data has been collected from the plants and is being processed through the Social Security records and will be further analyzed by Dr. Cralley's group to determine if there is an increased mortality among fibrous glass workers. It is expected that this study will be completed sometime within the next year.

This concludes the report of the annual activities of the Medical and Scientific Committee of NIMA.

Health & Safety Committee Report

In the Chairman's absence, J.M. Barnhart reported on the following:

1. Hearings on banning of asbestos spray or asbestos products, or control of asbestos. The City of Philadelphia (April 19, 1971) was cited as a typical ordinance and hearing.

2. Similar legislation has been considered in the following locations and hearings attended:

   a. City of New York (Jan. 26, 1971)
   b. City of Chicago
   c. City of Los Angeles (April 13, 1971)
   d. City of Boston (March 4, 1971)

3. Hearings that are to be held in the future on the aforementioned subject:

   a. State of Washington
   b. State of Illinois
   c. State of New York
   d. City of San Francisco

4. Hearings on the banning of asbestos spray and fibrous glass in air transmission systems:

   a. State of Nebraska (Feb. 7,8,9, 1971)
   b. State of New Mexico (March 4,5,6,7, 1971)
   c. State of Oklahoma (March 16,17, 1971)
   d. State of California (March 24,25,26, 1971) (Postponed to May 29, 1971)
   e. State of Connecticut (April 26, 1971)
   f. State of Indiana - two bills - will probably die in Committees.

5. Committee met several times to review article on fibrous glass (based on brochure) and is to be placed in ASHRAE Journal - Is in hands of editors.

6. Illinois Regional Insulation Contractors - letter to contractors, engineers, architects, etc. - do not use duct liner or duct systems as they represent a health hazard. The Association wrote to principals asking them to use the brochure thru their sales department to combat this. The above-mentioned article when published should be used for this purpose.

7. An Ad Hoc Committee is to be appointed in New York City to investigate insulation products that can be used as a substitute for asbestos - Mineral wool, fibrous glass, foams, etc. They will include in their investigations any health hazards in connection with the products. Included on the Committee:

   a. Norton Nelson, Dr., Chairman - Director of the Institute of Environmental Medicine, N.Y. University Medical Center

      Dr. G. Wright - St. Lukes Hospital
      Dr. Paul Gross - IHF
      Dr. C. Cooper - U of C
      Dr. L. Cralley - USPHS
      J.M. Barnhart - NIMA

Their investigations will include medical studies, engineering studies, and environmental studies to evaluate products.

Insofar as products themselves, J.M. Barnhart will supply ASTM Standards and ASHRAE Guide for their consideration. However, it is planned to supply names and addresses of Corporations for reference in conjunction with new product developments.

8. The Center of Study for Responsive Law wrote to W.D. Ruckelshaus, Administrator of the Environmental Protective Agency asking them to monitor ceiling spaces used as plenums that are sprayed with asbestos fiber in governmental buildings.

Appointment of Nominating Committee

R.E. Naylor appointed B. Leaman, Chairman, J.P. Kern, and R.W. Henry as a Nominating Committee to propose a slate of Officers and Directors for election at the Annual Meeting.

Report of Legal Counsel

Other Business

It was announced that J.P. Kern would be the representative from Owens-Corning Fiberglas on the NEMA Board of Directors.

Adjournment

There being no further business, the meeting was adjourned.

Respectfully submitted

J. M. Barnhart