FRICTION MATERIALS STANDARDS INSTITUTE, INC., E210, ROUTE #4, PARAMUS, NEW JERSEY

BULLETIN

NO. 428

February 18, 1972

To: ALL MEMBERS
SUBJECT: Demonstration - Membrane Filter Method for Airborne Asbestos Measurement
By: W. Reitze, Johns-Manville Corporation.

By earlier bulletins, the membership had been advised that Mr. W. Reitze of Johns-Manville Corporation would give a demonstration on the standard method for measuring airborne asbestos fibers. Mr. Reitze made this presentation on Thursday. February 10, 1972 at the Institute Office in Paramus, New Jersey.

Those Attending:

J. Greenen, President of F.M.S.I.)	
)	Maremont Corporation
R. Hemmelgarn)	Grizzly Brake Division
K. Barnhardt)	
J. Henning	World Bestos Company, Division of The Firestone Tire & Rubber Company
J. Graham	Carlisle Corporation Molded Materials Division
M. Jacko	Bendix Corporation Friction Materials Division
W. Richards	Thiokol Chemical Corporation
W. Reitze	Johns-Manville Corporation
E. W. Drislane	Friction Materials Standards Institute, Inc.

MEASURING AIRBORNE ASBESTOS FIBERS

Mr. Reitze discussed the earlier Impinger Method (no longer accepted) where the air sample is passed through a glass tube bubbler and the fiber is trapped with a subsequent count of fibers.

The currently accepted method calls for measurement of airborne asbestos fiber by the membrane filter method. Briefly, the pick-up is worn by a worker in the area to be measured with a small battery operated vacuum pump taking in air over a specified period - of different times, say 60 minutes, 90 minutes, or four hours. The asbestos fiber is trapped by the membrane filter and then carefully sealed and sent to the laboratory. The sample is examined using an optical microscope where a count of fibers is made.

The details of the test are described in:

"Measurement of Airborne Asbestos Fiber by the Membrane Filter Method" published by the Asbestos Textile Institute.

Asbestos Textile Institute
P. O. Box #239
Pompton Lakes, New Jersey #07442
(Price $1.00 per copy)

The Institute has ordered copies and will send one to each Delegate. If additional copies are desired, it is suggested that the member order the copies directly from the Asbestos Textile Institute.

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Mr. Reitze's demonstration will not be detailed as the booklet mentioned covers the equipment and procedures in detail.

COMMENTS AND SUGGESTIONS

The cost of pad and filters inserted are 70¢ per piece, from Millipore Corporation, Bedford, Massachusetts #01730.

It is suggested that four to six pumps (costing about $150. each) be used so that a supervisor can monitor more than one test at a time. A battery charger will cost about $50. One should have one charger for every two pumps.

Seeding (or sabotage) when a worker throws additional asbestos to the intake may ordinarily be detected when the sample is counted under the microscope, but additional tests may be necessary in the same area with different workers.

A pump could be mounted in a fixed position near the work place but the proper method is to have the pump attached with the intake facing down near where the worker breathes.

A binocular microscope with phase contrast illumination set for 400/430X magnification is required. A Bausch and Lomb microscope costing about $1,200.-1,500. is the basic instrument. Binocular microscopes with additional features could well be worth the additional cost, but professional advice should be used in the selection of equipment.

OUTSIDE SERVICES AND TRAINING

It may be feasible to have outsiders do the full job - from sampling through examination and reporting. Others will do the analysis work only where the samples are mailed to the laboratories.

Tracerlabs in California will do analysis work for about $50.-60. per analysis.

Johns-Manville will do the full job for a fee (Contact Mr. W. Reitze, Manager Industrial Hygiene Engineering Service, Johns-Manville Corporation, P. O. Box #5108, Denver, Colorado #80217)

George Clayton Labs, Southfield, Michigan will do the full job for a fee.

There are other labs that may do the entire package or the analysis work only.

Johns-Manville indicated it would be willing to train personnel in the technique in a two day period. They would take one trainee, or at most two trainees, to one instructor for $200. a day. These sessions would be at Phindern (Somerville) New Jersey or Waukhegan, Illinois. Again, the contact would be with Mr. Reitze in Denver.

It is suggested that the members familiarize themselves with OSHA's proposed standards. A copy of these standards, as issued in the Federal Register on January 12, 1972, is enclosed with Bulletin #427.

E. W. DRISLANE
Executive Secretary

Asbestos Study Committee
Delegates & Alternates
British Friction Materials Council
AIA/NA and L. D. Stickles, Counsel