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FRICTION MATERIALS STANDARDS INSTITUTE, INC., E. 210 RTE 4, PARAMUS, N.J.07652

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MINUTES OF THE MEETING

of the

ASBESTOS STUDY COMMITTEE

Thursday, August 17, 1972, at 9:30 A.M.

at the

Institute Office, E. 210 Route 4, Paramus, N. J.

MEMBERS PRESENT

I. H. Weaver, Chairman	Raybestos-Manhattan, Inc.
J. C. Henning	Firestone Tire & Rubber Co., World Bestos Division
W. Spurgeon	Bendix Corporation Bendix Research Laboratories
H. Wagner	Carlisle Corporation Molded Materials Division
E. H. Feierabend	Abex Corporation American Brakeblok Division

MEMBERS NOT PRESENT

W. B. Reitze	Johns-Manville Corporation

OTHERS PRESENT

D. E. Stone	Bendix Corporation Friction Materials Division
E. W. Drislane	Friction Materials Standards Institute

The meeting was called to order by Mr. Weaver, Chairman, at 9:30 A.M.

MINUTES OF PREVIOUS MEETING

The Secretary read a summary of the Minutes of the Meeting held February 10, 1972. These minutes had been released and a motion for their acceptance had been obtained.

Upon motion duly made, seconded and unanimously passed, it was

RESOLVED: To accept the minutes of the February 10, 1972 meeting as distributed.

INTERPRETATION OF THE OSHA REGULATIONS

The Asbestos Information Association (AIA) met with representatives from OSHA late in June. The purpose was to interpret various individual requirements in the OSHA regulations. Letters from the AIA to their member companies, dated July 5, 1972 and July 12, 1972, were distributed to the Committee Members. In the first letter, they covered areas such as labeling, clothes lockers,

respirators, monitoring and physical examinations, citations, OSHA inspections and employee notification. In the second letter, the AIA distinguishes between non-locked-in asbestos containing products and locked-in asbestos products (which would be brake lining and clutch facings). There are certain labeling requirements tied in to the non-locked-in containing asbestos products, but this letter also discussed the problems of subsequent working of locked-in asbestos containing products.

The members discussed some of the items in the OSHA regulations. One member indicated that during an inspection, there were 3 OSHA people at their plant for 7 to 8 days. Interestingly, the 3 OSHA people came on site the first day wearing respirators. Whether this was for effect or is a standard procedure for OSHA was not known. One of the items pointed out by an OSHA inspector on the scene was the dry sweeping of loose asbestos-type compounds vs. the wet sweeping or vacuum cleaning that OSHA calls for. Another member advised that they had taken out all air hoses around briquette presses and other machinery where loose asbestos is handled before it becomes locked in. Surprisingly to some members, asbestos sampling indicated that the inspection and drilling locations were problem areas. One member required that the respirators be worn at all drilling locations.

In an inspection at one member's plant, the OSHA people set up 5 stations and while 4 of them sampled below the 5 fiber per cc TWA, one station read 18 fibers per cc TWA. This member was cited (in averaging the readings).

When the Federal Government was considering the necessity for asbestos regulations, two of the companies represented by Members on the Committee were asked to cooperate in a survey by NIOSH. This study by NIOSH was to check over medical records and other such items to attempt to put the problem in prospective. NIOSH had indicated to the cooperating manufacturers that the information they were providing would be kept confidential. However, as it turns out, the OSHA people have copies of the NIOSH studies which would indicate that the confidentiality has been violated.

A member questioned what happens when the asbestos concentration in a work area exceeds 10 fibers per cc (the ceiling concentration in the OSHA regulations). The answer is that the employer must notify the worker so exposed, in writing, that he was exposed to such a concentration and the worker must wear a respirator in that area. The next question concerned what the proper means for notification of the worker would be. If an interpretation is officially asked of OSHA, they will indicate that a registered letter to the employee is the proper means of notification. In other areas, OSHA has indicated that meeting the spirit of the law is what counts and it is felt that bulletin board notification would suffice.

The next question concerned respirators. It was indicated that there were 3 disposable respirators approved by the Bureau of Mines, and these are manufactured by the A. O. Smith Company, Welsh, and Minnesota Mining and Manufacturing (MMM). Respirators furnished employees must have a proper fit and the employees must be instructed both as to the fit and the servicing of the respirator. Responsibility for testing and approval of respirators for protection against asbestos dust recently was transferred from Bureau of Mines to NIOSH. Until NIOSH approvals are issued, it is recommended only respirators (reusable or disposable type) having Bureau of Mines approval specifically for use on asbestos contaminated atmospheres.

LABELING PRACTICES

There are 3 areas for concern on labeling. One is the handling of the loose asbestos fiber from the point where it is received to the point where it is mixed and briquetted. The next is the handling of the products with supposedly locked-in asbestos during subsequent operations, such as drilling, grinding, inspection and boxing. The last concerns the handling of the brake lining or clutch facing by the customer where he may also do some drilling or grinding before the lined assembly is a finished product.

It was reported during this topic that there was a higher concentration of asbestos in the air in the Inspection Department than most members had realized. One member indicated that when pallets of brake linings were shipped there apparently is additional dust created during transportation. The question of surface dust on the working surface of a brake lining or a clutch facing was discussed. Where members have taken action to reduce the dusty type surface, they have found that they have actually altered the frictional characteristics of the material during the early miles on a vehicle. In other words, the brakes are not very responsive during the early mileage after reline.

In the AIA recommendations, it is suggested that where a manufacturer is shipping his brake linings or clutch facings (locked-in-asbestos products) he should notify the user of his product to the effect, "Power bench saws without collectors should not be used in cutting this product. If this is impractical, operators should be provided with a Bureau of Mines approved respirator." It was suggested that a notification be put in boxes of brake linings or clutch facings being shipped to customers. A sample of the caution labels suggested is attached to these minutes. Mr. Feierabend indicated that this recommendation would not be accepted warmly by many manufacturers. Mr. Wagner objected to the recommendation that warning notices be put in the brake linings as he felt it was another "red flag" that would bring more harm to the industry than the alleged good that would come from enclosing such notices. Several members have had customers call in to their Sales Departments asking if the handling of locked-in-asbestos in brake linings and clutch facings is a hazardous condition. Another asked if this notifcation was a requirement of the OSHA regulations. It was indicated that this was not specifically required by the OSHA regulations. The concern is, do those customers doing additional grinding and drilling of the brake linings or clutch facings create working conditions where the concentration of asbestos would be a hazard. Since small manufacturers are exempted from the OSHA regulations, they will probably not be running tests. Larger customers will, of course, be covered under the OSHA regulations and it is expected that tests will be run in these manufacturers' work areas. Whether the Institute would recommend such labeling in finished products shipped to the customers was not decided. It was felt that this subject should receive further consideration from the Members of the Committee before a recommendation is made. One member commented that there were instructions by some manufacturers advising that blowing out the wear debris from used brakes was not recommended.

This subject of recommending that brake lining and clutch facing manufacturers include a warning sheet in their shipments appears to be somewhat controversial and it is suggested that this matter receive some serious discussion by the Members of the Committee with those responsible at their companies. This item will most definitely be on an agenda for the next meeting of the Asbestos Study Committee.

SAMPLING FOR ASBESTOS FIBER COUNTING

Mr. Stone questioned the possible movement of asbestos inside the filter sample when sent to the lab for examination. Mr. Weaver indicated that this possibility was quite remote. Apparently the question arose after an OSHA visit to the member's plant. In response to a question, one member indicated it takes about two months from the OSHA sampling until the OSHA report is received. Further, it was indicated that the company hears if it is to be cited and not if the conditions are satisfactory. The OSHA regulations call for an eight hour time weighted average (TWA) for the measurement of airborne concentration of asbestos fibers. One member indicated that he runs his sample test for a continuous four hours to compute the concentration. With a continuous four hour sampling, there are sometimes reactions from the shop people.

Returning to the question on sampling for fiber counting, OSHA recommends a full straight eight hour sample. It was indicated they used 8 filters during this continuous sample. A member suggested using 90 minute sampling for most areas, or a complete job cycle if it took longer than 90 minutes. He recommended four hours of sampling for specials. A member questioned as to what minimum time was necessary in sampling to determine the peak concentrations that cannot exceed 10 fibers per cc. No specific answer was given, but Mr. Weaver indicated some sampling procedures which he felt were optimum for counting fibers entrapped by the filter. The number of tests for various conditions is suggested in this tabulation. One condition is where you are measuring friction materials with asbestos in the compund, and the other is for areas where you are handling all asbestos.

Optimized time for fiber collection - depending on TWA fiber per cc concentration expected in area. (Optimum for counting fibers on the filter)

Friction Materials TWA Fibers per cc	Optimum Number of Tests	All Asbestos TWA Fibers per cc
0- 5	1-8 hr. test	0- 3
5-10	2-4 hr. tests	3- 6
10-15	3 tests, 3,3,2 hrs.	6- 9
15-20	4-2 hr. tests	9-13
-	8-1 hr. tests	13-20

The question arose concerning the sample, where one is trying to pick up asbestos for counting. What about the other fibrous materials in brake lining that are not considered hazardous? Might these not be counted on the filter as well as asbestos? One answer that is indicated for the skilled laboratory man making the examination is that he should be able to distinguish between asbestos fibers and other materials. Further, one can go to 800X on the microscope and get a closer look at the materials picked up on the filter. Dr. Spurgeon indicated that one can use low temperature ashing to remove resins and other organic materials (primarily friction dust).

EPA AUTOMOTIVE EMISSIONS

Dr. Spurgeon indicated that the Bendix Research Laboratories are working under contract for EPA on particulate emissions from brake linings and clutch facings and will not be finished until March 1973. Dr. Spurgeon felt it would not be proper to discuss results and progress to date on this study under contract to the government.

THE STATUS OF EPA REGULATIONS

Mr. Weaver indicated that one of the reasons for scheduling this meeting in August was to go over the new EPA regulations. However, this agency has not finalized their regulations as yet and it is not expected to be published until sometime in September. Mr. Weaver indicated that the problem was not with the asbestos sections, but rather with some of the other materials and he expected that their regulations will not be very much different from the earlier temporary regulations on asbestos. Once again, those earlier regulations were more concerned with control practices (collectors and disposal techniques) than with numerical emission values. No further action can be taken in this area until the EPA regulations are published.

CONSIDERATION OF SUBSTITUTES FOR ASBESTOS

At the Annual Meeting, in June, this Committee was directed to consider a recommendation that the Institute sponsor a research study to determine the possibilities of substitutes for asbestos. The purpose of this suggestion was that if an outside study were to show that certain materials might very well be acceptable substitutes for asbestos, the information would be made available to the members. If the outside study indicated that there were no satisfactory substitutes for asbestos in friction materials, this information could be used as a defense should we have a recurrence of action similar to Illinois' banning of asbestos based brake linings. The Committee discussed this and as most of them are working on asbestos substitutes and some, in particular, have marketed materials without asbestos (primarily metallics), they felt this suggestion would not be warmly received by many members. One member indicated that it would be very difficult for them to sanction the Institute making any such study considering the work they have done in the past.

Upon motion duly made, seconded, and unanimously passed, it was

RESOLVED: That the Asbestos Study Committee does not recommend an Institute study in the area of substitutes for asbestos.

WASTE DISPOSAL

Someplace between the point where the asbestos product is finished and the waste materials are disposed of, the OSHA requirements will become EPA requirements. In other words, we are moving from the condition of standards in the work place to standards in the atmosphere or environment. The area of waste disposal is a major problem. All asbestos bearing wastes, according to the OSHA regulations, must be collected and disposed of in sealed impermeable bags or other closed impermeable containers. Whether a closed steel truck body is considered "impermeable" is a question. If the OSHA people mean what they say

when they suggest that an employer who is attempting to meet the spirit of the law will not have difficulty, it will be assumed that removal of the waste material in enclosed steel truck bodies would be an acceptable means of disposal. Most members indicated that they had great difficulty with polyethelene bags - they are too soft and they tear when they are stacked. The next area, which is a major problem, is the actual disposal of the dust. Usually, it is unloaded as land fill. One member uses a screw-type conveyor to fill a truck with a fixed container. The material is then dumped into land fill. The material is wet down after dumping and, after a hole is filled, it is covered up. Mr. Stone mentioned a procedure he had seen where they turn the dust into pellets and dispose of the pellets. One member indicated a solution for the disposal of the paper bags that are used to package the asbestos. They unload the asbestos bag inside a hood where they cut the bag. The hood has an empty plastic bag which the asbestos bags are picked up in.

The topic of proper disposal of the friction material waste products was discussed. The most desirable method of disposing of friction material waste products is to put it back into the friction material. Where a manufacturer has a one-formula product line, this is reasonable. However, most of the larger manufacturers would find it very difficult to segregate the various mixes picked up in their collection devices and recycle it back into the friction material without running into product problems. This is obviously the most desirable thing to do with the waste material, but for turning out a quality product it becomes very difficult. The most common means of disposal are to wet the product down and dispose of it as land fill. In some areas the material is bagged and sent to the dump. The problem of economical means to dispose of the waste from friction materials has been a problem in the industry for many years. It is likely to become a much more perplexing problem considering the regulations by OSHA and EPA. Dr. Spurgeon brought up the question of the possibilities of the Institute sponsoring paid research on waste disposal. It was indicated that within the Constitution and By-Laws of the Institute we could very well sponsor such research but it would be up to the Committee to make recommendations in this area. Generally, there are areas other than asbestos that are involved in this waste disposal problem. Among the items to be considered are: grinding dust, asbestos fibers and bags, phenolics which are pcked up in wet scrubbers, lead and its compounds, and the solvents that are driven off during processing. The Committee will consider this possibility at a subsequent meeting.

A member suggested a possible questionnaire to be sent out to the Membership concerning the problems of waste disposal to see whether the rest of the Membership could contribute some information in this area and to determine the extent of interest in the study of waste disposal by the Institute. The Members of the Committee should consider items to be included in such a questionnaire for discussion at the next meeting of the Committee.

MATERIALS OTHER THAN ASBESTOS

Because the problem of waste disposal is not a problem of asbestos only, questions were raised about the possibilities of extending the scope of the Committee's work beyond that of asbestos alone. The Secretary indicated that it would be within the scope of the Committee to extend their activity to materials other than asbestos. Lead and lead compounds are among the hazardous materials being regulated by Federal agencies. As many manufacturers use lead and lead compounds

in their friction materials, this might be a material to be studied by the Committee. On the other hand, because of the seriousness of the asbestos regulations, by taking on other materials, the efforts of this Committee might be diluted. Currently, there are regulations on solvents, silica, and other materials considered hazardous or noxious by the regulatory agencies. It is requested that the members consider the possibilities of expanding the activities of this Committee to cover other materials.

METHODS FOR EXAMINATION OF FIBERS

Dr. Spurgeon questioned whether there were any other reliable techniques for the measurement of asbestos fibers other than the membrane filter method. The question was also aimed at whether the regulatory agencies were considering other analytical methods. Mr. Weaver indicated that in conversation with AIA he had recently learned that the Department of Labor is considering a study on the possibilities of the gravimetric method for sampling asbestos fibers. He indicated that the membrane filter method would be in use for some years to come and possibly probably up to the July 1976 date when the stiffer two fiber per cc requirement goes into effect. The Department of Labor is considering a 15 man committee to study this possibility for sampling the asbestos. The make-up of such a committee would be as follows: 4 from industry, 4 "experts," 1 from NIOSH, 1 academic, 2 from labor, 1 medical, 1 from the American Industrial Health Association, and 1 consumer advocate. It is suggested that members of the Asbestos Study Committee consider whether their companies might wish to volunteer for service on such a Federal committee.

OTHER BUSINESS

Some of the Committee Members are operations oriented and others are environment oriented. It was requested that those individuals responsible for corporate decisions in the hygiene environment area be listed. That list is as follows:

Charles Borcherding	Abex Corporation - Chicago, Illinois (Corporate Industrial Hygiene)
James Armstrong	Bendix Corporation - Southfield, Michig (Safety Director)
Ike Weaver	Raybestos-Manhattan, Inc. - Manheim, Pa (Director of Environmental Control)
George Wilson	Firestone Tire & Rubber Co. - Akron, Oh

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There being no further business brought before the Committee, upon motion duly made, seconded and unanimously passed, it was

RESOLVED: To adjourn

Adjourned at 4:00 P.M.

Distribution: Committee Members
J. Greenen
L. Stickles
British Council
AIA/NA

E. W. Drislane
Executive Director