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ASBESTOS AND THE FRICTION MATERIAL INDUSTRY

Mr. I. H. Weaver of Raybestos-Manhattan, Inc., who serves as Chairman of the Friction Materials Standards Institute Asbestos Study Committee addressed the Annual Membership Meeting of the Institute. Mr. Weaver's address was delivered in Vail, Colorado on Wednesday morning, June 27, 1973.

Mr. Weaver's address follows:

When Ed (Drislane) asked me to attend your annual meeting last year, I had to decline, which may have been just as well in view of the confused status of both OSHA and EPA regulations at the time. This year things are only slightly less confused, but I am glad to be able to be here anyway to attempt to fulfill my responsibilities in reporting to you as your Asbestos Study Committee Chairman. Rather than present a detailed statement covering Committee activities for the year, I should like to use my time to review some of the more controversial and confused elements of the Federal Asbestos Regulations, and give recommendations as to what I think the stance of the Friction Materials Industry should be in regard to them.

In lieu of a detailed report covering the past year's activities, I have prepared a page and a half summary of the Committee's work from June '72 thru June 1, 1973. Mr. Drislane will circulate copies of this summary to anyone who may be interested in it, and if any of you have questions or recommendations concerning our past work or future intentions, please feel free to bring them up here, or if you prefer, transmit them to Ed for our review later.

Probably the single most significant event that occurred during the past year on the subject of asbestos hazards was the meeting of the International Agency for Research on Cancer that was held at Lyon, France last October. This meeting was attended by more than a hundred and thirty medical researchers and representatives of government, industry and labor from virtually every major asbestos consuming or producing country in the world. For four days intensive sessions on asbestos were held by three different panels, each made up of ten to twenty-five of the foremost medical and scientific experts operating in the various fields of asbestos-health research. Following the meetings the committees issued a combined report on asbestos cancers. I think the following five items summarize their most important conclusions:

(1) All major commercial types of asbestos can cause cancer.

(2) Evidence suggests that excess lung cancer is not detectable when occupational exposure has been low. (Just what is meant by "low" was not stated.)

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(3) Evidence has been greatly strengthened that all commercial types of asbestos except Anthophyllite may be responsible for mesothelioma. (Risk is greatest with Crocidolite, less with Amosite, and apparently still less with Chrysotile.)

(4) Cigarette smoking is an important factor enhancing lung cancer risk in asbestos workers.

(5) Surveys of occupational groups have shown a small excess risk of types of cancer other than bronchial and mesothelial, especially those of the gastro-intestinal tract.

The most important item here is the incrimination of all major types of asbestos as causal agents for carcinoma, particularly mesothelioma. Most of the other items only comfirm or substantiate previous conclusions. Since most of us use substantial amounts of Chrysotile asbestos in our formulations, association of this material with mesothelioma and other types of cancer is of serious concern.

A number of individuals who attended the IRAC meetings came away with the definite impression that government recognition of asbestos hazards has been accomplished and henceforth should be taken for granted. We can now look to the next major effort being geared toward worker education regarding occupational health hazards. The Occupational Safety and Health Act requires information be given by employers to workers concerning the degree of their exposure along with instruction in ways for minimizing exposure. Therefore, it is incumbent on allemployers whose workers handle or come in contact with asbestos-containing materials to provide some kind of instruction or training to educate the workers concerning potential hazards and means of avoiding them wherever possible. Accordingly, it would be prudent for all friction materials manufacturers to develop programs to assure adequate communication with their employees regarding asbestos dust hazards, and to inform them of monitoring results, good work practices, and their responsiblities in complying with OSHA regulations.

If such measures are not taken promptly and properly by management, industry will leave itself wide open for intense, and in my opinion justified, criticism by organized labor, as well as potential severe enforcement action by government, and attack by any number of social and environmental activist organizations. If we don't do this ourselves, be assured that someone else will jump on the bandwagon and do it in a way that will not be to our benefit. We can expect more and more activity by organized labor toward educating and training workers regarding health and safety problems and in pointing out to workers what their employers' responsibilities are concerning these matters.

Many union activists are really furious with government's failure to pursue the provisions of safety and health regulations to the letter, and there appears to be a good opportunity for industry to release reliable information concerning asbestos hazards both to their employees and to their customers before more inflammatory information of this type is aired in the media under organized labor's banner. These rules and regulations pose much more severe problems for other segments of the asbestos industry, particularly asbestos textile manufacturers, than they do for most friction material manufacturers.

I have been involved in asbestos products manufacturing for over twenty-five years and have visited dozens of plants and am aware of only a few friction materials products manufacturing operations that I consider to represent major problems in achieveing conformance to either OSHA or EPA requirements, including the 2 fibre per cc thereshold limit value. Since significant polarization may be expected always to exist between management and labor and between management and environmental groups concerning asbestos-health subjects, and since control or conformance to both EPA and OSHA regulations appears to be generally feasible, as far as friction materials are concerned, my recommendation to friction material manufacturers is that they proceed as rapidly as possible towards conformance with the regulations. Also I recommend avoiding inclinations to misinterpret provisions where the intent of the regulation is clear, but the wording may be subject to question. There has been considerable disregard of a number of provisions mainly in the areas of labeling, monitoring, employee education, personal protection, waste disposal, and use of warning signs by segments of asbestos products manufacturing, and I believe this applies to friction material to some extent.

One of the most obvious items has to do with industry's reluctance to accept asbestos products labeling as required by OSHA. There has been much advertising of asbestos textile products citing the benefits of treatments or coatings that purport to lock the fibre into the product in such way that it cannot become airborne during use. While these claims probably are true to varying degrees depending on the nature of the product, its use, and the way in which it is handled, I do not think this claim is at all applicable to friction materials.

I know of no way any of us can be absolutely sure that his friction products, regardless of whether they are sold as original equipment or on the replacement market, will not be subjected to additional operations or alterations in the field that could result in excessive exposure of workers or bystanders to airborne asbestos fibre. I have been appalled to learn of a number of instances where this problem has occurred, and some of these cases involved people that certainly might have been expected to know better.

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If this kind of thing occurs in fabrication operations of major OE customers, it appears to me there can be no argument about the need for educational measures to reduce chances of unnecessary exposure during grinding, drilling or cutting operations. To those who argue that labeling or other types of warning need not apply to replacement materials because fabricators or appliers handling replacement quantities are exposed relatively intermittently, I say emphatically this just ain't necessarily so! Large volume replacement users present major potential hazards, and even small job shops can needlessly expose people to high fibre concentrations if operations are performed without controls. That these may be intermittent and of short duration does not preclude possibility for occurrence of adverse health effects in hyper-susceptible individuals, or in less sensitive individuals who may receive exceedingly high doses of short duration but who may be smokers, or who may experience effects because of synergism with other materials to which they may be exposed either at work or elsewhere.

To me, labeling all containers or packages of asbestos-containing friction material is the very least the industry can do to fulfill moral obligation to its customers, their employees, and the public and at the same time conform with minimum requirements of the Occupational Safety and Health Act. I seriously question whether mere labeling is enough to fulfill this requirement. It has been suggested by others as well as myself several times in the past that additional instructions, of a more comprehensive nature than is practical to provide on a label, be inserted inside each package where a possibility exists that the product might be used in such manner that an airborne dust problem could be created. A number of responsible asbestos products manufacturers already are following this procedure, and there is a good possibility that it may be made mandatory in future regulations.

Adoption of these measures by industry would show good faith toward compliance and should reduce possibilities of future criticism by consumer protection groups. I doubt very much that it would have any significant effect on sales or consumption of asbestos friction materials. I know of no substitute for asbestos in normal automotive friction material service, and I know of little or no noticeable effect labeling has had on other products where cautionary labeling has been used thus far.

Keep in mind that NIOSH and the OSHA Advisory Committee recommended a much more severe label than the one we are talking about. This subject was heatedly debated during the OSHA Advisory Committee deliberations, and their final recommendation called for use of the word "Danger" instead of "Caution" and specifically mentioned that breathing asbestos causes cancer. Very frankly, I was exceedingly

surprised when the final OSHA Standard came out in favor of considerably milder working. Now I am perplexed that Industry resits the OSHA labeling requirement as virgorously as it does.

Many other elements of the OSHA Regulations came out more favorably toward industry than the recommendations that were submitted by NIOSH and the Advisory Committee, and stiff resistance by Industry will be needed to prevent OSHA from strengthening the regulations in months to come. We can expect considerable effort to be made by anti-industry elements of the medical profession, by organized labor, and by environmental groups who want the airborne standard lowered from 2 fibres per cc to 1 fiber per cc or even less. Some individuals even speak of asbestos in terms of zero TLV, which, of course, is completely impractical and would result in virtual banning of mining and use of asbestos for anything.

Another controversial subject is fibre monitoring. This is pretty much of a disaster area because of lack of confidence in the membrane filter method for sampling and analyzing for airborne asbestos. Much of this problem is attributable to the nature of the operation, which involves considerable judgement in addition to technical competency on the part of the people performing the tests. Even when performed by practiced individuals under the best possible conditions, the method is subject to wide variations in results. Needless to say, when performed by relatively inexperienced personnel under the widely varying conditions that exist in the field and between different laboratories, results can be extremely variable. In my opinion, the method is not at all suitable for enforcement purposes, but can be used to good advantage by industry for policing its own operations and for determining where to devote control efforts with maximum advantage or potential for improvement.

In spite of its deficiencies, I think the membrane filter method will persist for quite some time, but I will not be at all surprised if future emphasis by OSHA shifts toward work practice regulations rather than monitoring to a numerical standard.

Another controversial item has been the protective clothing requirement. This has created considerable question and controversy, particularly in the textile industry where ceiling limits are difficult to control on certain operations. Different OSHA regional offices have applied different interpretations to the protective clothing requirement, and it's hard for me to see how some of them can be as liberal on interpretation as they are.

The regulation specifically calls for full body cover including gloves, hat, and foot covering, where levels exceed the ceiling

limit. In spite of this, certain OSHA regional offices take the position that any protective clothing, even as scanty as a short sleeves shirt and trousers, is adequate, provided this clothing is changed before the employee leaves the plant. Personally I believe this lenient interpretation provides effective protection for most exposures, and I concur that the important thing is to make sure the employee doesn't take the contaminated clothing out of the plant.

Other OSHA offices stick to the letter of the requirement, which creates a major problem on many operations where discomfort from full cover clothing can have a very significant effect on operator efficiency. This requirement is under vigorous attack by companies that are having problems with it. No doubt some judgement by the Occupational Safety and Health Review Commission or the Federal courts will be forthcoming concerning this element of the regulations, and it is to be hoped that future revisions of the rule will permit more flexibility than the existing wording does.

Waste disposal has created problems with both OSHA and EPA regulations, and some friction material manufacturers already have extensive facilities in the works to cope with these problems. Of particular interest is the pelletization of friction material waste to reduce dust to a form that avoids necessity for bagging or otherwise containerizing the material. This also reduces or eliminates generation of fugitive dust during disposal in landfills. Several manufacturers have installed extensive pelletizing systems to solve their waste disposal problems, and this approach appears to be acceptable to both EPA and OSHA as well as state environmental control agencies. Other approaches have been to utilize wet disposal methods and, of course, some manufacturers are bagging and labeling the dry waste, where wet methods or pelletizing are impractical. Where bags or other containers are used for waste disposal, they should be labeled in accordance with OSHA.

Medical examination requirements have presented problems, particularly the one of determining what constitutes "asbestos exposure". Some companies have adopted the attitude that all workers, including office and research people, even though they are not normally considered to be exposed to asbestos, should be included in the medical surveillance program. On the other hand, many seem to follow the tack that anyone exposed to one fibre per cc or less need not be included. My advice would be to check everybody where there is any doubt about actual exposure.

I could dwell at considerable length on other problems and inconsis- of the OSHA Regulations and their various interpretations, but believe I probably have expounded on this enough for the moment. However, the one main point I want to get across is that any

comparison of the existing regulations with industry's position as stated in their input to the government prior to promulgation of the regulation, and compared with the recommendations of NIOSH and the OSHA Advisory Committee, will readily indicate that the existing OSHA standard, with the one serious exception of the two fibres per cc limit to be imposed in 1976, follows industry's position rather closely. If I appear to be defending the present OSHA Asbestos Regulations, it's only because I am very much aware of how much more strict these rules would be if the recommendations of NIOSH and the Advisory Committee had been followed. I doubt that many in the industry recognize or realize just how close they may have come to being regulated out of existence.

Future occupational safety and health legislation probably will rectify numerous inadequacies in present rules and may ameliorate some aspects of existing occupational safety and health standards. However, I seriously doubt that much relaxation if any is to be expected in regard to the Asbestos Regulations. I think the industry is going to have to mount a very determined effort to prevent these regulations from being tightened in the future.

The EPA regulations concerning ambient air control of asbestos are another matter. Although it was responsible for initially tagging asbestos as a hazardous pollutant, since doing so EPA has been much less diligent in pursuing its announced intentions toward regulation of the materials it declared hazardous. EPA first declared asbestos a hazardous air pollutant on March 31, 1971, and published proposed regulations December 7 of the same year. Hearings were held and much industry input was accepted and very deliberately reviewed by EPA before they finally issued the National Emissions Standard on April 6 of this year. This regulation was promulgated nearly a year later than called for under the requirements of the Federal Clean Air Act. For this EPA has been under considerable criticism ever since.

In addition to being late, the EPA standard is a lot less stringent than I or any other industry people, who have followed its development, expected. Nearly all the objections voiced by indusry concerning the originally proposed standard were removed before they issued the final regulations. In addition, they modified some requirements to the extent that no one in industry expected, or even would have had the temerity to request, in meetings where these subjects were discussed between industry representatives and EPA.

In essence, the standard boils down to the following statement as far as emissions are concerned: There shall be no visible emissions to outside air from any asbestos mill or manufacturing operation except when a specified method of air cleaning, also part of the standards, is used before the emission escapes. In general, the air cleaning systems specified, filter asbestos emissions to the point that visible emissions, other than possible condensed water vapor, would not be produced anyway.

Other requirements concerning use of tailings for surfacing roads, the regulation of demolition activities, and controlled application of spray-on materials are of little concern to friction materials processors. Our biggest concern lies with the emission standard, which will require the tightening up of dust collection facilities and waste disposal practices wherever fugitive dust problems occur.

The biggest problem with EPA regulation I have found thus far has been non-uniform interpretation of what constitutes a visible emission. I know the EPA people who drafted the regulation intended this to mean just what it says. If it's visible under any condition whatsoever, and EPA approved air cleaning systems are not in use, the emission is in violation. Since most friction materials manufacturers already are employing baghouses that meet EPA standards for cleaning their exhaust air streams, it is unlikely that any severe impact will occur to the industry as a whole on account of the EPA regulations as they now stand. Those few manufacturers who are relying on wet dust collectors that do not meet the EPA standard may have problems. The best way to be sure of meeting EPA requirements is to sharpen up on maintenance and operation of existing baghouse filters and replace existing wet collectors with baghouse filters to eliminate visible emissions.

In summary, the OSHA and EPA Asbestos Regulations are alot more lenient than many interested and concerned parties wish. We can expect pressure to have them tightened. Friction materials manufacturers should support Asbestos Industry efforts to have them mitigated in hopes they at least aren't made more severe. In the meantime, we should conform to the regulations to protect our employees and our customers and to avoid criticism and enforcement actions.

Your Asbestos Study Committee will continue to follow the interpretation of existing regulations, the trend of proposed changes, and the development of new medical and scientific study material that may affect future regulation of asbestos products. We welcome your questions and any input you may be able to make concerning our activities.