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Calidria asbestos

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PLAINTIFF'S EXHIBIT
tabbies
UC-1360

By H. B. Rhodes

Date 3/20/75

Full Name General Motors Research Lab. Address Warren, Michigan Mfrs. of	Interviewed Dr. W. Krebs (Telecon) 313-575-2791

BACKGROUND

We presently have a substantial amount of fiber count data for spraying and grinding of plastic which generally give counts that are low but clearly above background. It is our opinion that in most cases all or a majority of the fibers reported as asbestos are not actually asbestos. Taken at face value, our numbers suggest that substantial numbers of employees in fabrication shops where asbestos-containing parts are sanded or ground must have physical examinations to comply with OSHA regulations. There is hope that this question will eventually be taken care of by changes in the regulations but this looks like at least nine months away. In the meanwhile, this problem is a major obstacle to the acceptance of RG-244 at Dow Chemical.

OBJECTIVES

Our considerable attempts to resolve this analytical problem have no far been erratic, i.e., sometimes looked good and sometimes inconsistent. This call was made in the hope that we could get some useful ideas from General Motors.

Dr. Krebs was most cooperative and helpful. He noted that they had, undoubtedly, faced the problem with "Calidria" asbestos in certain of the Ohio Sealer products. Their basic procedure is as follows:

1. The sample is counted and examined by the NIOSH procedure at 400X. The general types of "fibers" present are observed and "memorized."

2. Same procedure as #1 is repeated at 900X.

3. The sample is checked under Nomarski illumination. This is generally, but not always, very helpful in spotting which are asbestos. It is, however, an operator exercising a limited amount of judgment and recording an observation. It is not an absolute proof.

4. The sample (on the filter) is shadowed with gold and examined at 2,000-10,000X in the SEM. The several general types of "fiber" seen optically are found and analyzed by electron dispersion with photos of both the "fiber" and its analysis taken. The proportions of the types of fiber making up the total are also checked visually and qualitatively.

The basic objective here is to build up a file of absolute and irrefutable evidence of the amount and type of fiber exposure that can be used in the future, if necessary, as defense in court.

Our approach was similar but differed in two key points:

1. The staining technique was used instead of the Nomarski.

2. The SEM was to be used at lower magnifications as an actual counting procedure, not as a qualitative or, at best, semi-quantitative fiber identification device.

Apparently, G.M. does not encounter the problem we seem to have experienced with the loss of nonasbestos particles from the filter on handling. We can certainly attempt, with a reasonable probability of success, to apply this approach to our grinding samples. It is fairly expensive, however, relative to a simple OSHA count.

Dr. Krebs also offered that their expert, Thomas P. Schreiber (313-575-2797), would be glad to discuss the SEM techniques with us. We will, undoubtedly, take him up on this.

He also mentioned that they had gotten into a real argument with NIOSH over the PAT program. G.M., using the best equipment, consistently got higher fiber counts than anyone else. NIOSH would not certify them as competent. This has finally been resolved in their favor.

RECOMMENDED ACTION

KSC Discuss their technique with Tom Schreiber.

Key questions;

1. How filter is mounted?

2. Possible loss of material?

3. Fiber analysis technique?

Typed 3/21/75
cjb