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DOCUMENT DESCRIPTION: Letter RE Cobra Composition Brake Shoes

St. Paul, Minn.
May 8, 1979

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*Advised
John Hillard
that this still
doesn't answer
question*



Larry D. Hillard

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As info John 5/16

Mr. H. M. Lary:

Your letter of April 12, 1979, with attached copy of a letter from Mr. D. H. Burns, in regard to composition brake shoes containing asbestos:

Investigations have been conducted by various manufacturers to provide assurance that composition brake shoes do not pose an environmental hazard to either personnel handling them or personnel in close proximity to the point where they are utilized during braking operation.

Specific action taken by one manufacturer of Cobra composition brake shoes is as follows:

Cobra Shoes' Environmental Characteristics:

1. A certain amount of asbestos fiber is included in the composition material and backing stock of each Cobra brake shoe. During the manufacturing process, the asbestos and other materials are molded into a hard block of friction material which is bonded to a steel backing plate. At this point, the asbestos is effectively contained within the friction material. As a further protection, the entire brake shoe is dipped in a sealant which will prevent any loose asbestos particles becoming airborne during handling of the brake shoes. The sealant also restricts rusting of the backing plate during outside storage and provides the distinctive "red" shoe color.
2. Various groups and individuals have inquired about the amount of asbestos fiber released by Cobra brake shoes during braking action. To be able to answer these questions, an elaborate series of dynamometer tests were ran in 1971 during which all the wear dust from various types of braking cycles was collected and analyzed. The results of these tests showed that almost all of the asbestos fiber is decomposed during brake applications. Less than one percent of the original asbestos fiber in the shoe remains as fiber in the wear dust and less than one-tenth of that becomes airborne. Since each stop wears only a very small amount of material from each shoe, and since each shoe contains only a very small percentage of asbestos fiber, it can be seen that the amount of asbestos fiber that becomes airborne with each stop is not significant.

Mr. H. M. Lary
Page Two
May 9, 1979

3. During the same period of investigation covered in (2) above, possible toxicity of gases liberated by Cobra brake shoes during braking was also given attention. Stop and drag tests were performed and samples of gases given off during braking were collected by a technician from an independent testing laboratory. The samples were subsequently analyzed and the results reported.

Results showed that the Cobra brake shoes gave off no extremely toxic materials, and only small amounts of hydrocarbon gases.

It was concluded that no amounts of harmful gases sufficient to be injurious to health were liberated.

4. The original Cobra brake shoe composition also contained lead. All shoes manufactured since November 1975 have utilized a lead-free composition. The primary reason for this change was to eliminate lead from our plant environment for the protection of manufacturing employees exposed to the raw material.
5. In early 1977, Wabco, in cooperation with JOHNS-Mansville research personnel, conducted a series of air sample tests in the Boston Subway in an effort to capture chrysotile fiber during train operations. Samples were taken between the cars near the track level, in the passenger and motor-man's area, and on the platforms over a 10-hour period of highest density operation. No significant fiber counts were seen on any of the filters.

Yours truly,

R. E. Taylor

cc: Mr. D. V. Hon
Mr. R. E. Johnson
Mr. T. G. Kotnour

bc: Mr. J. A. Bichsel —
Mr. D. E. Whitney

DEW:mjn