FILE NAME: Brakes (BRK)

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DOCUMENT DESCRIPTION: Notes for SAE

Need to consider that brake dust particulate from asbestos and other fibers used in friction materials usually differs from particulate found in manufacturing of friction products

most brake dust particulate that can become airborne would not be picked up from sampling/analysis under an OSHA inspection. lg fraction ~~Much~~ of this particulate is under 3000 A^{O} in length and behaves aerodynamically much like a gas. This particulate may not be biologically inert. Among garage mechanics, routine exposures of large amounts of fine brake dust may take its toll.

Whatever the merits or circumstances of recent litigation over occupational cancers related to brake dust, we feel it is prudent to promote sound work procedures and control measures during the performance of drum brake work.

As envisioned, EPA's brake mechanic education program will develop a videotape, a fact sheet, and a poster to reach shop operators, mechanics, and vo/tech students. We invite interested organizations to assist in the dissemination of these materials when they are completed.

III Investigation Other durable respirable fibers

trend to substitute for asbestos in brakes: various substitute brake lining materials are in use or under development

Problem: finding materials whose performance is comparable to asbestos, but which are either inert or not as active biologically

Initial laboratory testing for health effects of some of these substitute materials may be promising; for others, there may be cause for concern

substitution for substitution's sake alone is not the answer

relatively little is known about health effects of some of these substitute materials and virtually nothing is known as to how dust from brakes lined with these materials is composed chemically and physically

Non-respirable materials during manufacture may become highly respirable as a result of degradation from friction

Need for studies of these materials as they occur in manufacturing and as brake dust - only two known studies of biological activity of dust from asbestos lined brakes: Gross and Davies - very few samples of brake dust involved

Need to start conducting studies of biological effects of dust from brakes lined with substitute materials and consider these effects as brake linings are developed, lest we find ourselves with unexpected disease among mechanics and others in 10, 20, and 30 years

these studies should be part of the development process for the sake of public health and protection against product liability

insurance ~~is~~ has been an issue for the asbestos industry and the asbestos abatement industry - could become a parallel in the friction products industry

EPA is in the process of gathering health and exposure data on these substitute materials and welcomes your sharing with us plans and results of any relevant studies

Summary
control
Educ.
continuing investigation of newer developments