PLAINTIFF'S
EXHIBIT
WRG-661a

CAMBRIDGE

TO: H. A. Brown

DATE: May 11, 1972

FROM: H. C. Duecker

SUBJECT: Asbestos Substitute

CC:

The attached article suggests to me a possible way to turn our fibrous tremolite to an advantage and perhaps get the government on our side since it is generally acknowledged that tremolite is not as bad a pollutant as chrysotile.

Maybe we can market fibrous tremolite as a low (or non) pollution chrysotile substitute for applications where chrysotile dusting occurs, e.g., floor tile and brake linings. The acceptance of its reduc hazard may lead to less stringent standards for us, and possibly give us some unexpected income.

Tremolite has been used as a substitute for Amosite asbestos in either alkaline or acid environments. I am told that while there is no commercial fibrous tremolite mined in the United States, a small amount is imported from Africa. I heard of an attempt by Superior Asbestos Company to look for applications of Libby tremolite. Do you have any recollections concerning this? Does it make sense to follow this approach any further?

Duke

H. C. Duecker

HCD:mlr

Attachment

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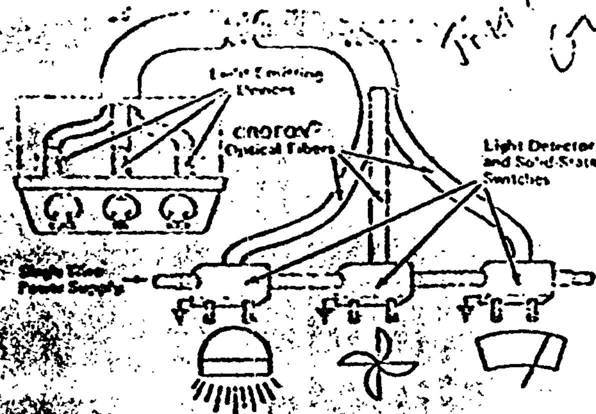
[redacted]



levels required to operate electronic switching devices. A working model of a system which used fiber optics to achieve simplification of the car's electrical harness was shown.

In the demonstration, there were no wires connecting a control panel with a horn and a headlight. When the horn button was depressed, a light-emitting device sent an infrared signal at a predetermined wave length through optical fibers. A receiver at the other end of the fiber reacted and caused the horn to sound. The headlight was turned on the same way, using an emitting device sending out a different signal.

The development is based on a new fiber optic material called Crofon IRX. The fibers show little susceptibility to radiation, essentially no cross talk, and the ability to carry more separate signals in a small diameter bundle. In computers, up to 48 different operations have been directed by a fiber bundle of 1/3-inch diameter.

Also shown to automobile manufacturers was a combination headlight switch and dashboard dimmer control unit. Dimming of dashboard lighting was achieved without using a costly rheostat.

Mineral Fiber May Replace Asbestos Filler

Jim Walter Research Corp., St. Petersburg, Fla. reports that mineral fiber may very well prove to be a suitable replacement for asbestos as a filler. The current concern about on-the-job health hazards, reflected in such legislation as the Occupational Safety and Health Act (OSHA) could very well speed up a switch away from asbestos. There is a growing concern about the health hazards of asbestos dust.

It is almost impossible to prevent airborne asbestos particles. The cost of adequate dust control equipment could be prohibitive.

Like so many other discoveries, that of mineral filler as a substitute for asbestos came out of an investigation of quite a different kind. Dr. David L. Skinner and Edward L. Moon were doing research in the use of fine-ground, crystalli

marble as a filler in plastics. At the same time, another research project into more efficient production of mineral fiber was going on. Moon happened to note similarities in the physical and chemical structure of mineral and asbestos fibers. It not only worked well but raw material costs were reduced. The binder absorption of mineral fiber is less, so that higher fine-ground marble levels were used to bring the premix consistency to about that of the asbestos system. Photo shows mineral filler being added to a plastic test formulation.

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