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1966 - USG Begins effort to replace Asb. in joint cmpds.

- fear regulation

UNITED STATES GYPSUM COMPANY
RESEARCH CENTER
PROGRESS REPORT

PLAINTIFF'S EXHIBIT

11-7-66
E.M.
P.A.M.
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Project: J-1 - Exploratory - Asbestos Substitute

Work was started to investigate substitutes for asbestos in joint treatment compounds. The first series was made with very fine si (Cab-O-Sil M-5, Cabot Corp.) in a non-casein all-purpose compound An air-floated clay (Excello, Thompson-Weinman) was also used in these compounds to improve application properties. None of the first experimental compounds looked as good as the AP-284A control they all had slow wetdown and very heavy mixing. In troweling tests the experimental compounds felt heavy initially, then broke down to give a softer, smoother spread but also more tendency to flow and to wipe off the board.

The test results for the first series, AP-291A-E, showed that the silica would have to be used at less than the 4-6% levels tried. The AP-293A-D series, containing the silica at 1-3% level, also showed characteristics of heaviness, stickiness and excessive flo On the favorable side, the compound containing 3% silica did have a softer, smoother feel after its viscosity breakdown under the trowel.

The AP293A-D series showed that a colloidal grade of attapulgus clay (Attagel 40, Minerals and Chemicals Philipp Corp.) was not successful as a direct replacement for asbestos in a non-casein all-purpose compound. Use of the clay at 0.5-4% of the formula gave low consistency compounds which mixed well but had heavy, di sticky trowel application properties and tended to flow on the trowel. The compounds had good bond to tape and fair check crack resistance.

This investigation will be continued as knowledge of other potent asbestos substitutes is discovered. It seems possible that no si material will fully meet requirements and that combinations of materials such as described in this report will be needed to repl asbestos.

A replacement for asbestos in joint compounds is desirable becau it would eliminate the present complete dependence on this raw material. Also, there is a possibility that asbestos may be declared a hazardous material and its use prohibited, eliminated, or severely limited. As an ethical proposition, if asbestos is in fact hazardous to human health it should be replaced in spite of its unique and valuable properties.

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