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EXHIBIT
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E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED

WILMINGTON, DELAWARE 19898

CC: J.A. Sigman-Textile Fibers-Wilm.
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ENGINEERING DEPARTMENT

January 5, 1971

R. B. HAYDEN
TEXTILE FIBERS DEPARTMENT
NEMOURS BUILDING, WILMINGTON

INDUSTRIAL DEPARTMENTS
MATERIALS ENGINEERING
THERMAL INSULATION RELATIVE DUSTINESS STUDY

Attached is a copy of a study report by Haskell Lab. on the dustiness of thermal insulation materials. This study was initiated by the Materials Engineering Group of ESD and was done in conjunction with Haskell Lab. and the Engineering Test Center as a part of the Company Thermal Insulation Program.

The purpose of the study was to determine the relative potential dustiness, as received from the manufacturer, of the asbestos bearing thermal insulations presently in our engineering standards.

With the information contained in this report and the following information in this letter, it should be possible to select insulations, when handled with reasonable care, that will fall within the presently established Threshold Limit Values (TLV) for asbestos dust. Conversely it points out the brands of insulation that present the greatest potential hazard.

I recommend that the fiber count be used to determine the least hazardous material rather than the materials with higher coarse/fine ratios (irrespirable/respirable) since the fiber counts are made on what are essentially respirable samples.

Note that the count of fibers greater than 5 microns in length represents only an 18 minute sampling period. The Threshold Limit Values (TLV) established by the American Conference of Governmental Industrial Hygienists represent time-weighted concentrations for a 7 or 8-hour work day and 40-hour work



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week. An insulator working under normal insulation shop conditions would be exposed to much less average concentrations. The ACGIH states "Time-weighted averages permit excursions above the limit provided they are compensated by equivalent excursions below the limit during the work day".

The statement in the report that the composition of the samples taken during sawing were the same as the samples taken after a settling period is significant in that we should not favor materials that visibly appear to have rapid settle out of dust after working them.

An inquiry to all of the manufacturers of the materials we tested determined that the types of asbestos in the insulations was either amosite or chrysotile; none contained any crocidolite, which is considered to be the least desirable. The percent of asbestos content of each of the insulations, as advised by the manufacturers compared very closely to the amounts determined in our study.

Specific recommendations have not been made because the insulations showing the least fiber count can be handled so carelessly that they can become the most hazardous, and conversely the ones showing the higher fiber counts can be handled so carefully that they become the least hazardous. Since insulation shops and operations vary widely throughout the Company the insulation selection should be made to meet the specific site conditions.

If I can be of further service to you, please contact me.

ENGINEERING SERVICE DIVISION

G. E. Lang

G. E. Lang, Consultant
Materials Engineering

GEL/cgs
Attach.

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