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Commonwealth of Pennsylvania
Department of Health
DIVISION OF OCCUPATIONAL HEALTH

Report of Survey

Asten-Hill Manufacturing Company
Henry and Roberts Avenues
Philadelphia, Pennsylvania 19129

Following a request by Mr. D. R. Holmes, plant manager, a survey was conducted on May 19 and 20, and June 4, 1964 to evaluate employees' exposure to asbestos dust. The survey was patterned after the study concluded on April 9, 1962 to compare the trend of the dust problem.

DETAILED FINDINGS

This plant is engaged in the manufacture of asbestos textiles. The operations surveyed included the blending, carding, winding, twisting, spinning and weaving of cotton, nylon and asbestos.

The only change in the plant since the survey concluded on April 9, 1962 was at the blending operation. New equipment and controls were installed, thus reducing the number of employees working in this area.

Atmospheric dust samples were collected using midget impingers with 95 percent ethyl alcohol as the collecting medium. Dust counts were made microscopically using a standardized light-field technique.

The threshold limit value for asbestos-containing dust is 5 million particles per cubic foot of air. Dust concentrations at the carding, universal winding, twisting, spinning and weaving operations ranged from 1.3 to 4.7 million particles per cubic foot of air. These data indicate that dust exposures in these areas are less than the threshold limit value.

PLAINTIFF'S EXHIBIT
SF 819.3

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Commonwealth of Pennsylvania
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Table

Dust Concentrations

Asten-Hill Manufacturing Company
Henry and Roberts Avenues
Philadelphia, Pennsylvania

Location	Dust * (millions of particles per cubic foot of air)	Remarks
Condenser	5.7	Operator's exposure
	5.6	loading carts
Blenders	3.2	Operator's exposure at the
	4.3	cotton and asbestos blenders
Carding	4.7	Operator's exposure at loading end of #3 and #4 machines
	2.9	Operator's exposure at lowest end of #3 and #4 machines
	2.7	General air between #1 and #2 machines
	3.6	General air between #5 and
	3.7	#6 carding machines
	3.4	Operator's exposure cleaning fly at #3 and #4 machines

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Table

Dust Concentrations

Asten-Hill Manufacturing Company
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Location	Dust * (millions of particles per cubic foot of air)	Remarks
Bobbin winding (two machines)	3.0 5.5 2.6	Operator's exposure at No. 3 machine. Spool yarn used - 3 asbestos, 7 cotton
	2.7 1.8	General air between machines Nos. 2 and 3
	0.9 1.3	Operator's exposure at machine No. 2. All cotton yarn used
	6.1 7.5 3.4 7.0 3.5	Operator's exposure at machine No. 3. Stock yarn used - 7 asbestos-orlon, 3 asbestos-dacron
	1.7 2.0 1.1 3.2 2.8	Operator's exposure at No. 2 machine. Stock yarn used - 4 cotton, 4 asbestos-dacron and 2 dacron

* Threshold limit value based on an eight hour workday - 5 million particles per cubic foot of air.

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Table (Concluded) Dust Concentrations July 12, 1964

Asten-Hill Manufacturing Company
Henry and Roberts Avenues
Philadelphia, Pennsylvania

Location	Dust * (millions of particles per cubic foot of air)	Remarks
Weaving room	2.0	Operator's exposure on platform of #26 loom
	4.3	Operator's exposure on platform of #19 loom
	3.4	Operator's exposure at spool rack of #19 loom
	2.0	Operator's exposure on platform of #13 loom
	3.4	Operator's exposure on platform of #28 loom
	3.5	Operator's exposure on platform of #12 loom
	1.3	General air in weaving department

* Threshold limit value based on an eight hour workday - 5 million particles per cubic foot of air.

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Table (Continued) Dust Concentrations

Asten-Hill Manufacturing Company
Henry and Roberts Avenues
Philadelphia, Pennsylvania

Location	Dust * (millions of particles per cubic foot of air)	Remarks
Twisting and Spinning	1.5	Operator's exposure at #4 twisting machine
	1.7	Operator's exposure at #7 twisting machine
	3.2	General air between #7 and #10 machines
	2.4	General air between #1 and #7 machines
Universal winding	3.3	Operator's exposure at #2 winding machine
	3.1	General air around #2 winding machine
Warp compressing	4.0	Operator's exposure at #2 machine

In the blending area, dust concentrations at the condenser and blenders ranged from 3.2 to 5.7 million particles per cubic foot of air. Considering the average dust concentration and the time spent at each of these operations, dust exposures in this area are also less than the threshold limit value.

In the bobbin winding area, dust concentrations of 4.4 and 8.6 million particles per cubic foot of air were found in samples collected on May 20, 1964. In order to obtain a more complete evaluation of dust exposures in this area, additional sampling was conducted on June 4, 1964. Dust concentrations in these samples ranged from 10.0 to 29.0 million particles per cubic foot of air. These findings indicate that dust exposures at the bobbin winding operations are excessive and control measures should be instituted to reduce exposures to less than the threshold limit value.

A Table of dust concentrations follows.

Survey by -

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Industrial Hygienists