

tudinal diameter of the dust from crude fiber was found to be 2.12 microns, while that of mill fiber was 1.35 microns. Transverse diameters were 0.69 microns and 0.45 microns for crude and mill fiber respectively. The longest fiber observed measured four hundred and two microns.

The percentage frequencies of the various-sized particles were determined for longitudinal and transverse dimensions. Figure 2 shows these values plotted on Hazen's logarithmic probability paper.

The difference in the two types of dust is further shown by examination of Table IV. Three per cent of the crude fiber dust was ten microns or more in length, while only 1.7% of the mill fiber dust occurred within these limits. Twenty per cent of the mill fiber dust was 0.5 microns or less in length, while only 16% of the crude fiber dust fell within this range.

TABLE IV. SIZE FREQUENCY DISTRIBUTION OF ASBESTOS DUST

Size Group in Microns	Crude Fiber		Mill Fiber	
	Longitudinal	Transverse	Longitudinal	Transverse
Under 0.49	37.9%	50.1%	46.9%	78.3%
0.5-0.99	27.4	26.0	24.8	20.3
1.0-1.49	5.2	7.8	7.5	2.2
1.5-1.99	6.2	3.4	4.0	1.0
2.0-2.49	4.5	1.5	4.6	0.5
2.5-2.99	2.9	---	2.4	---
3.0-3.49	3.2	---	1.7	---
3.5-3.99	2.7	---	1.0	---
4.0-4.49	3.3	---	2.0	---
4.5-4.99	2.6	---	2.0	---
5.0 and over	4.0	1.2	3.0	0.7

DUST CONCENTRATIONS IN THE PLANTS

All samples were collected by the modified form of the Greenburg-Smith impinger (58) using ninety-five per cent U. S. P. ethyl alcohol as the collecting medium. Dust counts were made according to the method described in Part I of this report (41). All particles were counted regardless of size. Particles less than ten microns in greatest diameter averaged approximately ninety-seven per cent of the total. The dust counts for the different operations are shown in Table V.