

A free hanging apron helps prevent escape of dust. This is a relatively clean operation, although the machine is rather old. The apron also provides safety protection when spindles, which move at a terrific rate of speed, have to be moved for maintenance or other operations. Exhaust ducts rise in between the rows of spindles and run along the top of the spinning apparatus.

The weaving process, which is our dustiest area, has a stiff sheet metal duct, and also flexible apparatus on both sides that are moved with the machine operator, as he works along.

I might add that it has been difficult to get people to wear respiratory equipment continuously, even for their own protection; hence the attempt has been made to control dustiness adequately to make their use unnecessary, except for brief maintenance-type operations.

In addition, at the suggestion of the Asbestos Textile Institute at our last meeting, a "wet weaving" process has been instituted on a trial basis to help control dustiness. The area concerned appears to be relatively "dust-free" and the method may thus offer promise.

We also humidify the atmosphere in the spinning area; at the ceiling, jets of steam are released and the high moisture level causes asbestos fibers to agglomerate and drop to the floor.

Figure 6 summarizes dust counts taken since 1942 in asbestos textile plant atmospheres. The data, which are not entirely ours, give a cross-section of several plants in different areas of the United States. It can be seen that the levels measured since 1952 have been within the existing Threshold Limit of 5 mppcf set by the American Conference of Governmental Industrial Hygienists. Some of these data have been collected by the U. S. Public Health Service.

You see, back into 1942 in this particular factory, dust counts peaked as high as 35 mppcf in places where the sacks were opened, and "picking" was done, and there was a sudden drop as they cleaned up the operation in 1943. You can also see counts for carding, spinning, and weaving. In carding, they stroke the asbestos fiber, to get it in line, and this has been one of the dustiest operations, and most difficult to control.

Figure 7 relates deaths due to asbestosis to dust levels in the period 1930-65, showing a peak in deaths in 1955. A corresponding peak in the carcinoma deaths occurred in 1959, as shown in Figure 8. Note that the cancer death peak in 1959 is apparently entirely due to lung carcinoma. Incidentally, we did include mesothelioma; we had two mesotheliomas and one sarcoma of the lung (in a lady). Since 1959 we