

Two principles are important in designing dust control systems for particular operations: Duct sizes should be a minimum of 4 to 5 inches in diameter with air duct velocities of 4,000 to 4,500 feet per minute; and face velocities across the work station should be 200 to 250 feet per minute.

Cloth collectors are efficient systems of dust control, and are in use in many J-M plants. Such systems can be scaled up or down to meet particular needs. However, it is important that the air to cloth ratio be no more than 3 to 1 for a shaker type collector.

One of the largest cloth collectors in the world is located at J-M's Jeffrey Mine in Quebec. This system encompasses the entire top floor of a 12-story building, and is under negative pressure. There are 80,000 bags in this collector, with thirty-two 350-hp motors driving fans that generate 5 million cubic feet of air per minute. This sophisticated system has helped J-M keep dust counts in all work stations in the fiber mill at or below five fibers per cc, with most below 2 fibers per cc.

In fact, of 943 J-M asbestos fiber work stations in the U.S., 860 or 91% of them are at or below five fibers per cc as of January 1, 1974, and 545, or 58% are below two fibers per cc.

Personal protective equipment is being used in those areas not yet below the five-fiber standard, although the company is currently working on all stations to bring them below the present five-fiber TLV and to the two fiber standard due to go into effect on July 1, 1976.

This reduction in fiber counts at J-M will be accomplished by: improved housekeeping, improved methods, changes in processes, and installation of improved dust control facilities.

SOME DUST CONTROL PRINCIPLES

J-M's 30 years of experience in handling asbestos fiber and developing effective dust control systems is available to J-M customers.

The following recommendations are designed as guides for those in need of dust control facilities, and should be viewed as principles to work from, not equipment one must have in order to solve a particular problem:

1. A good job of industrial housekeeping usually is the first step. An industrial vacuum cleaner should be used in areas where dust may be generated. If a plant already has dust control facilities, it is recommended that a vacuum cleaning system be used as a take-off from the present dust system by installation of a booster fan and a small cyclone. J-M will provide a typical layout and schematic of such a system.
2. If asbestos fiber is used in an operation and there are no dust control facilities, chances are there is a dust problem - and probably a two-fold one. One would be exposure of employees to asbestos dust (OSHA) and the other would be exhausting asbestos dust-laden air out of the building (EPA).

It is not advised that a customer who has an operation without dust control make an industrial hygiene survey, since this only will provide numbers for a need that is obvious. Instead, it is recommended that the customer arrange for an engineering survey which will result in a report with schematics and recommendations on how to correct dust problems inside and outside the