

to that variety of Chrysotile which has been vindicated. The case could arise, for example, that only one of the two Standard Chrysotile samples (Canadian and S.African) is given a total clearance.

6.5 Fibre Aerodynamics

One of the obvious differences between Chrysotile from the Coalinga deposit and that from other sources is its inherently small fibre dimensions. This, together with the unique wet refining method employed, has meant that there is a great abundance of very small liberated fibres available for inhalation into the lung.

The diameter of a single Coalinga fibre is less than $300 \text{ \AA}$. It has already been shown in 4.5.1. that fibres stand a good chance of deeply penetrating the lung if their diameters are about 3.5 microns or less. With a diameter at least 100 times smaller, there is no doubt that the Coalinga fibre is capable of reaching the innermost portions of the lung. This argument will apply to the fibre bundles contained in a bag of open material as well.

It may be seen from electron photomicrographs of Coalinga asbestos that the aspect ratio is usually much greater than 5, and that the fibrils are highly symmetrical, and are unassociated with gangue materials. Thus there is the likelihood that they will behave in a manner similar to fibreglass in Figure 3. As a result, they will have a greater tendency to align themselves with the direction of air flow. Assuming laminar flow in the bodily air passages, which in fact is probably not the case, the fibres will avoid contact with the nasal hairs, and so will be capable of passing into the depths of the lung.

7.0 RECOMMENDATIONS

7.1 Dust Counts

7.1.1. Bags: Dr. Dernehl in the Toxicology Report states:

"In paper manufacturing, it would be desirable to know the dust concentrations where the asbestos is dumped from bags into the pulp slurry."

Dr. Taylor states recently that he believes there is more dust produced in opening a paper or plastic bag of asbestos than there is with a conventional hessian sack. He was questioned on his reason for this, but no satisfactory answer was forthcoming.

The author has himself witnessed a dust cloud in the vicinity of bags of both pelletised and open materials when making up customer sample bags after dark. A large number of suspended particles were visible in a torch beam.

It is recommended that a dust count be made in the region of a freshly opened bag of pelletised and open products. The readings obtained will be independent of the site of opening.

7.1.2. Cutters and Crêping Doctor: It is appreciated that dust conditions vary from mill to mill. A rough guide as to the amount of atmospheric dust present in the region of typical cutters and a crêping ICS-019