

formaldehyde resin. The histological studies of lungs of experimental animals showed an extremely small fibrogenicity of faolite in comparison with anthophyllite. Nine months after the introduction of dust the average content of hydroxyproline turned out to be equal for "faolite" animals to 3284, for "anthophyllite" 5763, for the controls 2375 μ g (differences with controls are statistically reliable). The average content of hydroxyproline for 1 mg of faolite dust was in this case 5 times less than for 1 mg of anthophyllite dust.

Thus, the covering of the active sections of the surface by the bonding agent sharply decreases the fibrogenic potential not only of chrysotile but also of anthophyllite-asbestos.

As is known, many silicates possess a fibrogenic ability. The especially increased fibrogenicity of chrysotile-asbestos is caused by its high specific surface area and weakness of the intracrystalline bonds which determine the formation of many topochemical centers which actively affect the biosubstratum. In turn, the indicated features of asbestos largely are caused by its tubular structure.

In accordance with this hypothesis the more expressed fibrogenicity of long filaments is determined anyway not by their larger traumatizing ability, but first of all by the relatively best retention in the lungs (Timbrell, Skidmore, 1968,

Grzywniakowski, 1968).

It was established that, although relatively long particles (> 8 μ m) are 12% of the total number of particles in the lungs of those who died from asbestosis, their surface comprises more than 50% of the total surface of all particles (Landwehr, Bruckmann, 1962). Thus, better retention in the lungs and the relatively larger active specific surface area determine the higher fibrogenic ability of longer fibers.