calcination (800°C) of chrysotile-asbestos it loses water of crystallization and in its crystallographic constants it approaches olivine. Our investigations showed that in this case the fibrogenic nature of chrysotile-asbestos decreases. Subsequently, this was confirmed in the experiments of Szymczyklewicz et al. (1962), erroneously examining calcined chrysotile-asbestos as amorphous, and noncalcined - as crystal. In 1966 they showed that "crystalline" chrysotile-asbestos, added to a tissue culture of the isolated lungs, absorbs considerably more oxygen than "amorphous" asbestos or fiberglass.

The significance of intracrystalline structures is indicated by the different fibrogenic nature of the individual forms of asbestos. Thus, it is widely acknowledged that the highest fibrogenicity is possessed by chrysotile-asbestos, and less by asbestos of the group of amphibole, in particular anthophyllite. Meanwhile, the basic distinction between them is in the fact that in the particles of amphibole the atoms of metal are connected with SiO_4 by double bonds, and in chrysotile-asbestos by one bond, which makes these bonds less stable. Furthermore, the weak lateral forces between the layers of the equally charged hydroxyl ions in the adjacent crystals of chrysotile-asbestos facilitate the best uncoupling of bundles into separate crystals and an increase in the total surface. Finally, the ratio of length to thickness of an elementary chrysolite filament is equal to 100:3, and for individual filaments of amphibole-asbestos is 100:20. According to Speil, Leineweber (1968) the elementary tubular crystals of chrysotile-asbestos have a thickness on the order of 150 Å, and amphibole - 1000 Å.

But what is an elementary crystal? According to the existing representation, chrysotile-asbestos is an inorganic polymer, the primary cell of which is ortho- and metasilicate of magnesium (A. B. Davydov, Z. T. Ivanov, 1961). In practice this is confirmed beyond question by the creation of synthetic inorganic fibrous

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