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or of solvent containing materials may be grouped under 3 general headings: (1) inhalation hazards; (2) dermatitis hazards; and (3) fire and explosion hazards. The author considers each of these categories separately. It is the responsibility of the industries involved to acquaint themselves with local requirements, if any, and current opinions on the subject. They must then decide whether or not the quantity of vapors which may be expelled from their plants is such as would exceed present or near-future standards for permissible emissions. If the quality is excessive, the problem of air cleaning must be considered. Solvent vapors lend themselves to 2 different kinds of air cleaning methods: (1) absorption, and (2) combustion. The first kind involves expensive equipment, but if the quality of solvent evaporated is large, it may pay for itself in recovered solvent. The second method, using either catalytic or with gas-fired afterburners, is less expensive initially but produces no byproducts other than heat. The latter type of air cleaning process must also be investigated from the point of view of the production of other atmospheric contaminants. If the solvents contain no elements other than carbon, hydrogen and oxygen, and combustion is reasonably complete, there is no problem.

### INDUSTRIAL DUSTS

- 979 Chronic Interstitial Pneumonitis. A Histogenetic Study. P. Gross.  
A.M.A. Arch. Pathol. 69, 706-715 (June 1960). Reprints available from Industrial Hygiene Foundation upon request.

In interstitial pneumonitis, the alveolar wall becomes thickened in one, or possibly in both, of 2 ways: (1) By expansion of its lateral borders, due to pressure of fluid, cells, connective tissue fibers, or combinations of these in the space between the capillaries and the surface epithelium. (2) By an accretive growth upon alveolar surfaces of alveolar cells and their associated reticulin network. Whereas the former gives rise to moderately thickened collagenous walls, it tends to leave alveolar spaces intact. The accretive growth of alveolar walls, on the other hand, compromises the alveolar spaces and often obliterates them. By the obliteration of contiguous air spaces, nodulations or more irregular foci of consolidation are formed, which ultimately may undergo collagenization and hyalinization. By confluence of these foci, major portions of lobes or entire lobes may become severely scarred and impaired in function. Because capillaries are difficult to identify in the pulmonary lesions of experimental animals studied, information regarding the contributions which these vessels make to interstitial pneumonitis is lacking. Human material offers only fragmentary information on this point. On the basis of observations in 2 cases of asbestosis, it appears likely that expansive alveolar fibrosis may be asymmetrical; i.e., the deposition of collagen may occur on only one side of a capillary over a given length, thereby allowing partial respiratory function. By the same token, it is likely that a capillary will become obliterated if collagen is deposited along both sides of the capillary in the space or potential space situated between the basement membrane of the capillary and that of the alveolar surface epithelium. Evidence that alveolar capillaries may proliferate is seen in profusions of capillaries found in apposition on both surfaces of thick, sclerotic alveolar walls.

-- Author's summary

- 980 Hypertension Due to Inhaled Submicron Amorphous Silica. G.W.H. Schepers.  
Toxicol. Appl. Pharmacol. 1, 487-500 (Sept. 1959).

In laboratory studies with rabbits, the inhalation of a synthetic amorphous silica of 200A\* particle size range provoked elevation of the right and left ventricular pressures of the heart. The magnitude of the response was proportional to the dosage of silica administered, the rate, and the duration of exposure. These cardiac pressure elevations were partially reversible on cessation of dust exposure. There were also concomitant radiographic changes, electrocardiographic deviations, modifications of lung functions, hematologic, and electrolytic disturbances. Autopsy findings indicated cor pulmonale, congestive cardiac failure, emphysema, and chemical pneumonitis as the chief responses.

-- APCA Absts.