573 Recording Dust Measurement by the Small Ion Accumulation Method. W. Coenen. Staub 24, 350-353 (Sept. 1964). German

The factors to be observed in dust measurement by the small ion accumulation method, with the aid of theoretical and experimental data are discussed. The influence of the condensatio: nucleus density, air temperature, and the air pressure on the measurement of low concentration of dusts in industrial hygiene are investigated. -- APCA Absts.

574 The Tyndallograph, an Optical Dust Measuring Apparatus with Electrical Indicator. J. Stuke and J. Rzeznik. Staub 24, 366-368 (Sept. 1964). German.

In the West German coal mining industry the tyndalloscope has been employed for more than 10 years as a routine dust measuring apparatus. To make possible automatic and recording measurement, a continuous recording, optical, electric dust measuring apparatus has been developed. The construction and mode of operation of the tyndallograph and the problems which had to be solved in the development are reported. -- APCA Absts

575 Farmer's Lung—A Mass Outbreak. M. Kubasek, V. Hrich, and E. Stankova. Casopis lekaru ceskych 103, 701-704 (June 19, 1964).

After several hours of work with hot and moist oats, a group of 14 adolescent classmates developed an acute form of farmer's lung. In addition to the clinical picture and an analysis of the influence of the exposure, the author submits his pathogenetic interpretation. In the acute stage a response to the inhaled alien protein is involved. This protein is formed in the oats by the action of fungi during the process of moist heat exposure. The subsequent course is interpreted as an immunoaltering disease. -- APCA Absts.

576 A Thesaurosis Survey. S. Tanaka and E. Pendergrass. Arch. Environmental Health 10, 438-440 (March, 1965).

A roentgenographic and historic survey for thesaurosis was conducted among 126 Pennsylvania beauty operators. No chest roentgenogram showing shadows suggestive of thesaurosis was found. Three of four hair sprays randomly selected from the 10 most frequently used were found to contain polyvinylpyrrolidone as their resin component. There are 11 references. -- Authors' summary

577 The Size Distribution of Dust Retained in the Lungs of Rats and Dust Collected by Size-Selecting Samplers. J. Cartwright and J.W. Skidmore. Ann. Occ. Hyg. (London) 7, 151-167 (June, 1964)

Measurements were made of the weight and size distribution of dust recovered from the lungs of rats that had been exposed to experimental clouds of coal dusts and of glass spheres. With any one dust cloud, the dusts in the lungs of animals with a high dust retention were found to have the same size distribution as dusts from animals with low dust retention. Comparisons of the recoveries of glass spheres from animals killed six months after dust exposure with those from animals killed five days after exposure showed that approximately half the dust by weight had been eliminated during the six months, but that there was no change of size distribution. A variety of size-selecting dust samplers were used to monitor the experimental dust clouds. The weight and size distribution of the dust samples were measured, and from these measurements retention curves for the rats' lungs, and acceptance curves for the sampling instruments were derived. Calculation showed that the theoretical characteristics of the samplers (50% acceptance) at 5 microns unit density spheres should, in theory, correspond reasonably well with the rat-lung retention characteristics, but all the size selectors were found to depart from their theoretical performance, and in some cases to accept particles several times larger than the theoretical limiting size. -- APCA Absts

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