

flow-packed tower scrubbers, oil-coated air filters, electrostatic precipitators and various makes of scrubbers using water or oil sprays. Preliminary investigation narrowed the field to burning the fume or scrubbing it with solvents, but the former was rejected as too expensive. The Pease-Anthony scrubber was found to be the most efficient of the devices available. Details of the preliminary tests and of the construction of the permanent apparatus are given. The greatest difficulty was in the elimination of the residual fume particles of 1 micron diameter, but that was accomplished by a combination of sufficient water and low volume of high density fume. Removal of fume is practically complete, as shown by smell, the most sensitive test. The effective ratio of size of water droplets to fume particles and the time of action of the sprays are discussed as important points, and several other factors are mentioned as contributing to the success of the operation. Developments of improvements under way are discussed.

(Reprints may be obtained from Research Laboratories, National Lead Company, Brooklyn.)

INDUST. HYG. DIGEST.

CONTROLLING FUME HOOD EXHAUST IN ATOMIC ENERGY LABORATORIES. HOMER B. CLAY, Heating, Piping, and Air Cond. 22:77 (July) 1950.

Because of the unusual hazards to health presented by many materials used in atomic energy work, special attention must be given to proper regulation of fume hoods and exhaust systems. Consideration is given to the design of the hood or canopy to provide the proper air pattern for collecting all or some part of the contaminants from the source, the design and construction of ducts to carry off the materials without excess condensation or concentration of contamination at any point, the collection of contaminants before releasing the transport medium, and the design and application of fans and blowers used in creating the proper exhaust air volumes.

FROM NUCLEAR SCIENCE ABSTRACTS.

ROUTINE VENTILATION SURVEYING IN SOUTH WALES ANTHRACITE MINES. E. M. SMITH, Information Circular no. 7530, United States Department of the Interior, Bureau of Mines. Pp. 11. October 1949.

This report describes the practice of a large British anthracite mining company in carrying out a routine program of ventilation surveying. Very few companies make complete surveys. The data collected include pressure and velocity measurement, from which are calculated pressure drops, zonal resistances and other derived data, and methane content.

INDUST. HYG. DIGEST.

A REVIEW OF DUST-ALLAYING PRACTICES AT WORKING FACES IN SOME BITUMINOUS COAL AND LIGNITE MINES. J. J. FORBES, R. K. FRANKLIN and S. T. REESE, Information Circular no. 7566, United States Department of Interior, Bureau of Mines. Pp. 29. May 1950.

Data on dust-allaying practices were compiled from the reports of Federal inspectors on 1,637 bituminous coal and lignite mines in 23 states, employing nearly 300,000 men. Most of the information is presented in tabular form. It is shown that approximately one third of the mines employing 25 or more men provide no protection, or inadequate protection, against dust from the working face. In a still greater number of mines, the dust produced during loading and transportation is not being allayed effectively. Rock-dusting will reduce the dust explosion hazard in such mines, but dust allaying will reduce the explosion and pneumoconiosis hazard and provide better visibility. Generally dust allaying was practiced to a greater extent in mechanical-loading mines than in hand-loading mines with fewer workmen. Mines employing less than 25 men were not included in the study, but probably dust allaying is not practiced in many of them.

CONDENSATION OF AUTHORS' SUMMARY and CONCLUSIONS.

SAFETY IN MINES RESEARCH, Twenty-Seventh Report, 1948, Ministry of Fuel and Power, London, His Majesty's Stationery Office, 1950.

During the year under review the main emphasis has been on the control of explosions, but increased attention has been given to other hazards.

Various studies of the dust hazard have been carried on. Investigations of the performance of dust-sampling instruments have been continued. The British Konimeter gives results similar