

professional groups in the field of occupational health. In these studies both sociological and economic information should be developed and should provide a baseline for evaluation of engineering in relation to specific occupational hazards. -- Authors' conclusions

- 809 Weigh Odor Control Methods Carefully. W. Vlesseman.
Heat, Pip. & Air Cond. 31, 94 (Sept. 1959).

To eliminate or abate an odor condition in an air conditioned space it is necessary to remove the offending gases or vapors or reduce their concentration. Sources of odors are many, and detection and measurement must ultimately rely on human appraisal. Odors are affected by temperature and humidity. They may not only be objectionable to the sense of smell but may also cause irritation to the nose and throat. Some of the physical methods for removal are by ventilation with outside air, air washing or scrubbing, chemical adsorption, and masking. Chemical absorption or destruction of odor sources, vapor neutralization, masking, and catalytic combustion are other means. For a given building the quantity of outside ventilation air admitted should be in accord with engineering standards and local codes. The author presents an example of possible economies and comparative investment and operating costs of an outside air system and a recirculating air system.

-- Cond. from Author's summary.

COMMUNITY AIR HYGIENE

- 810 Adhesion of Solid Particles to Solid Surfaces. Margaret C. Kordecki and C. Orr, Jr.
Arch. Environmental Health 1, 1-9 (July 1960).

The tenacity with which particles typical of those found in polluted atmospheres adhere to solid surfaces like building walls, automobile surfaces, and plant leaves, was investigated over a range of relative humidities. Because of great variation in individual adhesion tensions, size distributions were determined covering many adhering particles before and after subjection to increasing disruption forces applied to all the particles by means of a centrifuging technique. Particles continuing to adhere after centrifuging at increasing speeds were found to shift rather uniformly toward the smaller sizes, both when single and bimodal distributions were employed. Average forces of adhesion were found to agree reasonably with previous measurements, and, as would be expected the data suggest that electrostatic forces exert their primary influence at low relative humidities while the surface tension of condensed water films becomes important at high humidities. Finally, calculations show that, exclusive of precipitation, natural phenomena like wind and vibration can never cause re-entrainment of more than a small portion of particle debris once it becomes attached.

-- Authors' summary

- 811 Multi-Operational Chamber for Calibration Purposes. R. S. Brief and F. W. Church.
Am. Ind. Hyg. Assn. J. 21, 239-244 (June 1960).

Frequently during industrial hygiene and air pollution work, a need arises for a chamber which can be used for calibration purposes. A multi-operational calibration chamber has been designed and built for this purpose. The chamber incorporates extreme flexibility in operation. Both static and dynamic operation are feasible within this chamber. Thus, both continuous and batch generation of gases, vapors, dusts and mists can be utilized to prepare any reasonable concentration of these materials within the chamber system. The mixtures that can be prepared are used to improve the accuracy of industrial hygiene and air pollution field studies, as well as permit research and development work in these fields. Specific for this calibration chamber include: (1) Calibration of air sampling and detection devices.