IN RE: ABRAMS November 1992

87 Forced-Draft-Fan Noise Can Be Controlled. G. J. Sanders. Elec. Light and Power 42, 46-50 (April, 1964).

Modern techniques for noise reduction are discussed including silencing, fan-room configuration design, and use of sound absorbing materials. A 33 1/3 rpm record is appended which helps to illustrate the article. -- J. Am. Soc. Safety Eng. Absts.

88 New Techniques in Pressure Suit Cooling. E.C. Wortz, D.K. Edwards, III, and T.J. Harrington. Aerospace Med. 35, 978-984 (Oct. 1964).

Suit cooling methods developed in the authors' laboratories employing use of liquid heat transport loops with heat exchangers inside the environmental suit appear to offer considerable promise for overcoming most of the disadvantages of ventilation cooling at high metabolic rates. The principal advantages of the methods described are reducing the ventilation flow and minimizing sweat rate, while achieving complete removal of the metabolic heat. Because of the physiological stress problems known to exist with ventilation cooling methods at high metabolic rates, it is believed that future life support systems and space suits will utilize liquid cooling methods. -- Authors' summary

89 A Self-Contained Atmospheric Protective Ensemble for Titan II. E.C. Wortz, et al. Aerospace Med. 35, 1062-1066 (Nov. 1964).

The toxicity of the Titan II propellants—hydrazine, unsymmetrical dimethylhydrazine (UDMH) and nitrogen tetroxide (N_2O_4)—necessitated a new concept in the design of protective clothing. To ensure utmost protection and efficiency of personnel in hazardous conditions encountered in propellant transfer requires a gas-tight enclosure and a portable life support system. To meet this requirement the Self-Contained Atmospheric Protective Ensemble (SCAPE) was designed, developed, and tested as a system. The development criteria were that the ensemble provide adequate breathing, cooling, and ventilating air for one hour; adequate humidity control; adequate visibility and mobility; be impermeable to UDMH, hydrazine, and N_2O_4; and have an operating range of -20°F. to +120°F. This paper describes the design of the outer garment, helmet, and faceplate and the design of the environmental control system. Discussion of the testing program covers developmental, environmental, physiological, psychophysical, and materials testing.

90 Laboratory Safety in Research with Infectious Aerosols. A.G. Wedum. Public Health Repts. 79, 619-633 (July, 1964).

Safety in the research laboratory is discussed in relation to infection by aerosols. The author presents a breakdown of illnesses to which man is exposed in the laboratory and their causes. The length of time selected common diseases are viable in connection with normal laboratory animals and some applicable regulations for the control of these agents are presented. A suggested floor plan for a small facility is shown and the various types of equipment necessary for safely handling aerosols are discussed. Routine periodic medical examination of employees is recommended. There are 70 references. -- Public Health Eng. Absts.

COMMUNITY AIR HYGIENE

91 Methodology for the Study of Public Attitudes Concerning Air Pollution. Jane Schusky, et al. J. Air Poll. Control Assn. 14, 445-448 (Nov. 1964).

A significant element of a community's total air pollution picture is the "state of mind" of the people living in the area with respect to air pollution. The reasons why a study of public attitudes can be an important factor in planning an air pollution control program are briefly summarized. The methodology applied in one such study in the St. Louis Metropolitan area is described, and possible variations related to different scope, objectives and survey area characteristics are suggested. -- Authors' abst.

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