

ventilation, first because carbon dioxide and most toxic materials are heavier than air, and second, because natural diffusion is very slow. The principal effect of carbon dioxide is asphyxiation, and many other materials are anesthetic. A table gives rapidly fatal concentrations of carbon tetrachloride, trichloroethylene, and benzene and the density of such mixtures relative to air, all of which are definitely over one. Anesthetic effects may be produced by concentrations as low as one-third of those which are rapidly fatal. The following precautions are recommended: (1) each worker who enters a pit should wear a harness with a rope or cable held by another worker outside the enclosure, and a third worker should be available for assistance; (2) no enclosed or partly enclosed space should be entered until its contents of volatile or partly volatile material are removed; the air should be tested for oxygen content; (3) clean, fresh air should be supplied to the tank after contaminants are removed; (4) if the contaminants cannot be completely removed, the worker who is to enter must be provided with a positive source of respirable air or oxygen (an "all purpose" gas mask is useless); (5) if operations are to be performed in such spaces, exhaust ventilation balanced with an equal volume of supplied uncontaminated air must be used; and (6) when skin absorption of contaminants is possible, protective clothing should be provided. These precautions are described in greater detail.

- 303 Pole-Top Resuscitation. Data Sheet D-376, National Safety Council.
Natl. Safety News 72, 33-39 (Dec. 1955).

Pole-top resuscitation is often necessary immediately after an electric shock, without waiting until the rescuer and victim are in the most comfortable and ideal positions. The standard and modified methods are described. The procedure will be determined largely by the individual company policy and the training, confidence, and resourcefulness of the rescuer. Detailed instructions are given for the rescuer and assistants, including precautions for the safety of the rescuers, methods of placing the victim in position, lowering the victim to the ground, after-shock precautions, and training of line crews.

- 304 The Suppression of Methane-Air Ignitions by Fine Powders. J. E. Dolan and P. B. Dempster.
J. Appl. Chem. 5, 510-517 (Sept. 1955).

The effect of the particle size of some inorganic materials on their efficiency as ignition suppressors has been studied. It has been found that there is a direct relationship between this efficiency and the surface area of the powder exposed to the advancing flame. Flame inhibitors have been placed in an order of efficiency on this basis. The alkali halides have been shown to have an efficiency which cannot be fully accounted for by the thermal characteristics of the powders, and an explanation is suggested. -- Editor's summary

- 305 Thirty-Second Annual Report on Safety in Mines Research 1953. Great Britain, Ministry of Fuel and Power, Safety in Mines Research Establishment, Portobello St., Sheffield, England.
A. H. A. Wynn, Director. 83 pp. (1954). 65 cents.

This report describes a wide variety of researches concerned with safety and health in mines. Among the subjects are: development of safer methods of blasting; measurement of deposition of coal dust; studies of the use of stone dust for prevention of explosions; studies of breathing apparatus; research on dust sampling problems; study of dust produced by rotary drilling; studies of the hazards of kaolin dust; and studies of the amorphous layer on silica dust. Much of this work has been presented in papers which considered some of these subjects in detail. -- Cond. from Bull. Hyg.

11 206 1396