

NOVEMBER 1932

STEWART AIRWAYS

- 464 Guarding Against Nitrous Fumes. Anonymous. Safety Eng., 81, 47-8 (1940). From an English Accident Prevention Bulletin.
The oxides of nitrogen are among a few gases that may cause grave injury with immediate indications, and their effects may be realized when it is too late to save the victim. To avoid injury it is necessary to know where they are likely to occur, to avoid breathing them when they occur and to obtain medical advice at once when ill effects are felt, however trivial they may seem. Nitrous gas may arise wherever strong nitric acid is used. The prefix "nitro" in the name of a substance should be a warning that such fumes may be encountered in its use or manufacture. An atmosphere containing enough of the fumes to show their red color is highly dangerous, and even smaller concentrations, enough to cause coughing, choking sensation or smarting of the skin are injurious. Whenever fumes may arise the operation should be either totally enclosed or provided with strong exhausts, supplemented with general ventilation. Breathing apparatus of the canister type is suitable for repair work and any other necessary exposure only when the concentration of the fumes is low. Otherwise air-supplied or oxygen-generating respirators must be used. When molten nitrate baths are used for heat treatment, the temperature must never exceed 530°C.
- 465 Carbon Monoxide and Hydrogen Sulfide Poisoning in Industrial Processes and Protection Against Them. E. Neitzel. Z. ges. Schiess- u. Sprengstoffsw. 35, 157-9 (1940). (German).
A discussion of the opportunities which exist in many industries for the accidental release of carbon monoxide and hydrogen sulfide in poisonous quantities. Symptoms of carbon monoxide poisoning and the mechanism of poisoning are described. Methods for detecting the presence of carbon monoxide in air and for post-mortem tests for the gas are given. The three kinds of protective masks described, including: (1) a mask with a canister containing a catalytic agent composed of a mixture of cupric oxide and manganese dioxide, which oxidizes carbon monoxide to carbon dioxide; (2) the oxygen breathing apparatus with a supply of oxygen, and (3) the hose mask to which air is pumped through a tube. Hydrogen sulfide is no less dangerous than carbon monoxide. In high concentrations unconsciousness occurs practically instantaneously. It also causes eye injuries. Instances of rapid poisoning are cited. Sources of hydrogen sulfide in industry and elsewhere are listed, and symptoms of poisoning are described. Suitable gas masks should be worn and stringent safety precautions should be observed.
- 466 Beware Ammonia Hazards. Anonymous. Power Plant Eng., 45, 69 (May, 1941).
A brief note on the precautions to be observed in handling and using cylinders of ammonia including proper manipulation of valves and the necessity of remaining with the cylinder during discharge.
- 467 Anhydrous Ammonia. R.J. Quinn and R.L. Carr. Water Works & Sewerage. 88, 132-6 (March, 1941).
In addition to data on the physical properties of anhydrous ammonia, the author presents information on its physiological effects, precautions in handling and first aid treatment of persons overcome or injured. The precautions include ventilation by fans near the ceiling, use of only iron and steel for piping, avoidance of mixing the gas with chlorine, and care in handling. First aid includes removal to fresh air, use of artificial respiration but not the pulmonary treatment of eyes with boric acid, nose and throat burns with boric acid and light skin burns with picric acid. More serious burns should not be treated with picric acid but should be cared for by the physician. The tannic acid treatment is advocated. Henderson and Haggard's table of limiting concentrations is given.