

- 1019 The Role of the Public Health Laboratory in Air Pollution Programs. H. L. Helwig and J. A. Maga. Am. J. Public Health 50, 933-936 (July 1960).

The role of the public health laboratory in an air pollution program is dependent upon the program responsibility of the department of public health. In the dynamic field of air pollution, these responsibilities are continually changing to meet new needs and to apply the new research findings. In nearly 4 years of activity, the Air Industrial Hygiene Laboratory of California State Department of Public Health has developed its contribution in the areas of laboratory support of programs of air pollution measurement, development of laboratory methods of analysis and epidemiological applications, research on the chemical and physical nature of air pollutants, and the relating of results of research on air pollution to the program of the department.

-- Authors' summary

- 1020 Regulation of Refuse Incinerator Design by Public Agencies. G. H. Abplanalp and J. W. Stephenson. Am. J. Public Health 50, 1155-1162 (Aug. 1960).

Most satisfactory and nuisance-free incinerator operation can be assured by close state control of design, based on sound established criteria. By contrast, state approval of design may be of little value when not based on such criteria. Appended to this paper is a brief summary of items recommended by the authors for inclusion in state design standards. Considering the public health aspects of refuse disposal, the authors believe that it must come under the jurisdiction of public agencies. Most logical and most effective would undoubtedly be control by state health departments in a manner comparable to present control of water and sewage treatment.

-- Authors' summary

- 1021 Stokers for Incinerators—New Trend to Traveling Grates. J. H. D. Blanke. Power Eng. 64, 82-83 (Feb. 1960).

This article discusses three types of mechanical grates designed to increase the efficiency of incinerators for refuse burning. One consists of an inclined endless belt type grate which receives raw refuse for drying and discharges the dried material to a horizontal endless belt type grate for burning. Both New York and Philadelphia have installed incinerators using traveling grates of this type. To achieve maximum incineration of refuse, the burning stoker is made longer than the drying stoker with the speed of the latter less than that of the former to obtain a thinner layer of material on the burning grate. Burning rate is better than 70 lbs. of refuse per hour per square foot of the combined effective grate area of both the drying and the burning grates. The second type of moving grate is the inclined rocking grate stoker. Progressive burning of wastes is affected by upward movement of alternate hydraulically actuated stoker bars. This stoker has found wide acceptance by municipalities, institutions and industries. This type stoker may be installed in tandem, the first unit serving as a drying grate and the second as a burning grate. The third type of grate is installed in a vertical cylindrical furnace with either top or side charge. These stokers are either of the revolving cone or tuyere type. Large installations of these types have been constructed in Miami, Florida, and Hempstead, New York. The Hempstead installation utilizes the heat generated from refuse combustion to produce 120,000 lbs. of steam per day.

-- Public Health Eng. Absts.

- 1022 The Oxidation of Hydrocarbons on Simple Oxide Catalysts. K. C. Stein, et al. J. Air Pollution Control Assn. 10, 275-281 (Aug. 1960).

Recently a large number of catalysts have been tested for the oxidation of various hydrocarbons at the Bureau of Mines Laboratories for the purpose of developing catalysts which may be suitable for oxidizing hydrocarbons in automobile exhaust gas. In summary, the following statements may be made: (1) Branched hydrocarbons are more difficult to oxidize than normal hydrocarbons. (2) Ease of oxidation increases with molecular weight in homologous series. (3) Unsaturated aliphatic hydrocarbons are more easily oxidized than the corresponding paraffins, and susceptibility to oxidation increases with increasing saturation. For example, acetylenes are more reactive than olefins. (4) In comparing open chain and