193 Bamboo for Gas Cleaning. Anon. New Scientist (London) 7, 1539 (June 16, 1960).

Gases from blast furnaces, which are laden with fumes, may be cleaned by passing them upward through a tower which has been packed with layers of wet bamboo. This method, which was developed by scientists at the North Eastern Polytechnical Institute, was found to be very efficient for dealing with gases from small blast furnaces. It was felt that there should be no reason why it should not prove just as effective with larger volumes. After such gases have been cleaned, their high content of heat makes them of economic value elsewhere in the steel plant. The use of bamboo in such a manner may be unconventional but it offers to the Chinese metallurgists equipment which is simple to construct, operate, and maintain. Also, its efficiency is very high and the costs of installation are low. -- APCA Abstr.

194 Gas Chromatographic Analysis of Incinerator Effluents. W. N. Tuttle and M. Feldstein. J. Air Pollution Control Assn. 10, 427-429, 467 (Dec. 1960).

A procedure for the gas chromatographic analysis of incinerator effluents has been described and has been used to analyze the effluents from a series of incinerators. Results indicate that, when the concentration of C_2 hydrocarbons is below 10 ppm, the C_3 to C_6 hydrocarbons are generally present in less than 1 to 2 ppm. When the C_2 hydrocarbons are present in high concentrations, the C_4 to C_6 compounds are generally present in significant concentrations. Some specific C_4 to C_6 compounds found in the effluents from incinerators have been identified. The standard of 50 ppm C_2 to C_6 hydrocarbons in incinerator effluents appears to be a satisfactory emission standard since it adequately differentiates between incinerators which are well designed and operated and those which are not. -- Authors' conclusions

195 Automobile Exhaust Particulates—Source and Variation. H. C. McKee and W. A. McMahon, Jr. J. Air Pollution Control Assn. 10, 456-462 (Dec. 1960).

Automobile exhaust particulates amount to approximately 5% by weight of the amount of gaseous hydrocarbon emission, and consist of lead compounds, carbon particles, motor oil, and non-volatile reaction products formed in the combustion zone from motor oil. These reactions involve the formation of free acidity, high molecular weight olefins, and carbonyl compounds. Quantitative estimates of the effects of engine design variables and changes in operating condition on these chemical reactions cannot be made because of the very complex relationships involved. Particulates in the blowby are composed almost entirely of unchanged lubricating oil. As a very rough approximation only, the amount of material emitted in the blowby is perhaps one-third to one-half the amount emitted in the exhaust; the same approximate ratio applies to either particulate emission or gaseous hydrocarbon emission. Blowby emissions are influenced by mechanical condition of the engine, probably to a greater extent than exhaust emissions. The total amount of exhaust particulate emitted from automobiles is much less than the amount of hydrocarbon vapor emitted, and therefore from an over-all pollution standpoint is less important as a primary pollutant. The extent to which the particulates may influence atmospheric reactions is not known, but the physical and chemical nature of the particulates would indicate that important effects might occur. The catalytic effects of finely-divided carbon are well known, and the non-volatile olefinic, acidic, and carbonyl compounds associated with the carbon might be expected to be quite reactive. This suggests the possibility that the particulates might influence the course of gas-phase atmospheric reactions through catalytic or other effects. -- Cond. from authors' summary

196 Standards for Air Quality in California. J. A. Maga and J. R. Goldsmith. J. Air Pollution Control Assn. 10, 453-455, 467 (Dec. 1960).

It is hoped that air quality standards adopted by the California State Department of Public Health will be of value in the State's attack on air pollution and that they will promote studies and research needed to refine and extend the standards. Standards must not be a substitute for knowledge and good judgment. They can only act as guides. As in the case for other