83 Nashville Sulfur Dioxide Emission Inventory and the Relationship of Emission to Measured Sulfur Dioxide. W.W. Stalker, P.A. Kenline, and H.J. Paulus.
J. Air Poll. Control Assn. 14, 469-474 (Nov. 1964).

A detailed inventory of sulfur dioxide emissions was prepared as part of the Nashville Community Air Pollution Study conducted by the Public Health Service during 1958-1959. The primary purpose of the inventory was to provide data for a study of the relationship between the emission of sulfur dioxide and measured ambient levels. The development of the inventory, data collection methods, and calculations are described. Ambient levels of sulfur dioxide were related to average emissions of sulfur dioxide in such a way (correlation coefficient = 0.81) that mean seasonal concentrations of atmospheric sulfur dioxide in square-mile areas could be predicted with fairly good confidence from a knowledge of sulfur dioxide emissions. For these long-period (average) predictions meteorological variables can be disregarded. On a square-mile basis, on the average, one ton of sulfur dioxide emitted per day produced a mean atmospheric suflur dioxide concentration of 0.022 ppm, and 10 tons of sulfur dioxide per day produced a concentration of 0.067 ppm. -- Authors' abst.

84 Continuous Determination of Nitrogen Oxides in Air and Exhaust Gases.
D.L. Ripley, J.M. Clingenpeel, and R.W. Hurn.
Intern. J. Air and Water Poll. 8, 455-463 (Sept. 1964).

Nitric oxide is the principal nitrogen oxide present in automobile exhaust gases and in photochemically reactive systems important to air pollution studies. Only the dioxide is readily determined in instruments that are available and suitable for exhaust research applications. In order to use these instruments for determination of nitric oxide it is necessary first to convert the simple oxide to the dioxide form. A solid chemical oxidant was developed to effect this conversion in a continuous process appropriate to the analytical requirement. The oxidant is particularly useful in atmospheric analyzers used in air pollution studies.
-- APCA Absts.

PREVENTIVE ENGINEERING

85 Handling Flammable Dust. C.I. Fishkin and R.L. Smith.
Chem. Eng. Progr. 60, 45-48 (April, 1964).

The engineering design factors are considered: Inerting, venting, suppression, and containment. Five characteristics of dust that can be measured and evaluated are covered briefly: Maximum explosive pressure, explosive concentration, rate of pressure rise, particle size, and ignition energy. Explosion suppression systems are outlined by specific examples. Protection methods and design are suggested. -- Public Health Eng. Absts.

86 How to Control Noise in Distribution Systems. R.M. Hoover.
Heating & Air Conditioning Contractor 55, 50-55 (March, 1964).

It is shown how to solve problems associated with vibration of fans and noise through terminal outlets; examples are presented of cases where minimum background noise is needed in office areas of a single building, and how to eliminate damper-grid noise in an auditorium air conditioning system. -- J. Am. Soc. Safety Eng. Absts.