

*PROCEEDINGS
OF THE
FOURTH ANNUAL INDUSTRIAL
AIR POLLUTION CONTROL
CONFERENCE*

STATE OF THE ART OF AIR POLLUTION CONTROL
TECHNIQUES FOR INDUSTRIAL PROCESSES
AND POWER GENERATION

1974

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CONTROL CONFERENCE

STATE OF THE ART OF
AIR POLLUTION CONTROL TECHNIQUES
FOR INDUSTRIAL PROCESSES AND
POWER GENERATION

MARCH 28-29, 1974
KNOXVILLE, TENNESSEE

SPONSOR

DEPARTMENT OF CIVIL ENGINEERING
THE UNIVERSITY OF TENNESSEE

EDITED BY:

Kenneth E. Noll
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John O. Walling

PREFACE

The papers contained herein were presented at the Fourth Annual Industrial Air Pollution Control Conference held at the Hyatt Regency, Knoxville, Tennessee and sponsored by the Department of Civil Engineering, The University of Tennessee. The theme of the Conference was Industrial Air Pollution Control Applications. The speakers presented information in a wide range of industrial applications including metallurgical processes, mining and mineral products industries, and combustion processes. There were sessions on Application of Ambient and Source Monitoring for Industrial Operations as well as timely information on the control agency's training and manpower needs, dispersion modeling, and the new source performance standards.

An exhibit area was an added attraction at the Conference facilities. The exhibitors were Air Quality Testing and Design, Inc., American Air Filter, The Carborundum Company, Lear Siegler, Inc., Thermo Electron Corporation, and John L. Underwood Company, Inc. A line of equipment was shown including source sampling and ambient monitoring instrumentation, and air pollution control equipment.

The Conference Committee consisted of Kenneth E. Noll, Conference Director; Wayne T. Davis, Program Committee Chairman; John O. Walling, Program Committee Chairman; William A. Drewry, Coordinator; John C. Burdick, III, Banquet Chairman; and Jeffrey S. Gilbert, Exhibit Chairman. Session Chairmen were Michael J. Matteson, Karl B. Schnelle, Jr., Joseph R. Duncan, Hal B. H. Cooper, Jr., Benjamin Linsky, and Kenneth E. Noll. Arthur C. Stern delivered the Keynote Address. Thomas Healy the Luncheon Address, and Zygmunt Plater the Banquet Address.

The sincere appreciation of all connected with the Conference is extended to all authors for their efforts and assistance. Appreciation is also due to Robert Rainey, Ken Jones, Christopher Kornyski, Terry Pritchett, and William Heidtman Civil Engineering graduate students who assisted with visual aids and Conference details, and to Debbie Huiting, Secretary, Department of Civil Engineering, who assisted in preparing the manuscript for the Proceedings and with the Conference correspondence. Special recognition is due to Ron Rader and his staff, Department of Conferences and Institutes, for their able assistance and advice, and to the Hyatt Regency staff for facilities and meals.

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Keynote Speech

A TIME TO RETHINK AIR POLLUTION CONTROL*

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Introduction

One beneficial result of the current energy crisis is that it is forcing us to rethink our programs, strategies, positions and attitudes in air pollution control; and, at the same time, it is allowing us a breathing spell during which to do it. If we look back in history, we find that this type of breathing spell has occurred in the past, and that, during such occasions, we have regrouped our forces, redirected our efforts and come out with better oriented and more vigorous programs than before the pause. However, this will not happen now if we just sit back and sulk. It will happen only if we use the immediate future wisely to plan the next phase of our long-term air pollution control effort.

Breathing Spells

Our present breathing spell is due to a widespread public feeling that environmental regulations were contributing to the energy crisis and, therefore should be put on the back burner until the energy picture comes into sharper focus. However, in the long run, it is hard to believe that the public will accept dirty air as the price they have to pay for energy. Once they have either

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