

- Catalyst Characterization;
- Monolithic Reactors for Environmental Catalysts;
- Catalyst Deactivation.

“Part II discusses the application of catalytic systems for mobile source emission control, the automobile catalytic converter, diesel oxidation catalysts (the newest major application of environmental catalysis), and the decomposition of ozone in high-flying aircraft.”

Chapter titles for Part II are:

- Automotive Catalyst;
- Automotive Substrates;
- Diesel Engine Emissions;
- Diesel Catalyst Supports;
- Ozone Abatement Within Jet Aircraft.

“Part III describes the stationary application of catalysts, including volatile organic compounds, reduction of nitric oxides, and oxidation of gaseous carbon monoxide and hydrocarbons.”

Chapter titles for Part III are:

- Volatile Organic Compounds;
- Reduction of NO_x;
- Carbon Monoxide and Hydrocarbon Abatement from Gas Turbines.

“Finally, Part IV, on emerging technologies, covers those catalytic air pollution control research processes that, if developed, will dramatically change current catalytic technology for environmental control.”

Chapter titles for Part IV are:

- Fuel Cells;
- Ambient Air Cleanup.

The coverage is comprehensive, well-illustrated and exceedingly well referenced.

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Gary F. Bennett

Air Pollution Control Equipment Selection Guide

Kenneth C. Schiffner, Lewis Publishers, Boca Raton, FL, 2002, US\$ 144.95, 248 pp., ISBN: 1-5871-6069-2

Kenneth Schiffner with contributions by seven colleagues has authored an easy-to-read text describing the selection process for air pollution control equipment. Schiffner and colleagues write in a conversational format which is not normally found in texts, but this format does not detract from the information provided. In each section, the author says

he "... defines the type of gas cleaning device, the basic physical forces used in it, its common sizes and costs, and its most common uses." Each chapter (generally) follows the same format: device type, typical applications and uses, operating principles, primary mechanisms used, design basics, and operating suggestions.

The book, as I noted above, is written in a less formal style than usually is found in texts which makes it an easy, "quick read" text. That style, along with the excellent equipment diagrams and photographs supplied by vendors are the book's strengths.

Counterbalancing, though, are significant weaknesses. First, I was unable to find any cost data although the author promised such in his introduction. Second, the theory on which the pollution control devices operate is sparse. Moreover, surprisingly, there are no references to the literature other than a general section on suggested reading, which is less than helpful (for example, the author refers to *Chemical Engineering Magazine* as a reference; given this periodical appears monthly and publishes general articles on chemical and environmental engineering, specific references to articles are needed). Fourth, I could find no logic to the sequence of the chapters. Personally, I would have arranged the chapters to discuss particulates followed by gases, etc., whereas the author discusses particulate removal and gas control alternately. Finally, NO_x control is discussed but SO_x removal is not.

The above criticisms aside, the book will be useful to those who desire an overview of pollution control equipment. Control devices are nicely described and illustrated. General design data are given.