

The book contains the following eight chapters:

1. Introduction
2. Setting up a program for waste minimization
3. Machining and other metal working operations
4. Solvent cleaning and degreasing
5. Metal plating and surface finishing
6. Painting and coating
7. Removal of paints and coatings
8. Waste treatment to minimize disposal

The book begins with a definition of waste minimization and the current regulations. Then in Chapter 2, the author gives tips on how to set up one's own projects.

Chapters 3 through 7 describe specific waste reduction techniques utilized by a number of industries, organized along industrial lines: metal working, solvent cleaning, metal plating and painting and coating. The process, the type of waste each process generates, and the method used to reduce the amount of hazardous waste generated are discussed. Sources of equipment, design data and installation and operating costs are provided.

The author is employed by a consultancy agency, who, I am sure, helped in the preparation of the book. I understand this help and the wish to acknowledge it, but continued mention of the firm's name, including a description of the firm, after the author's biographical sketches is rank commercialism and should be avoided; it does nothing to improve my respect for the firm; nor was I impressed by the author wasting space necessary to list all the state Hazardous Waste Agencies.

Putting these personal prejudices aside, I found the book quite good, especially the numerous examples (the author calls them case studies) of successful waste minimization projects. The final chapter discusses methods of pretreating waste streams to minimize the amount of waste that ultimately has to be disposed. Techniques discussed include: (1) recovery of a useful product, (2) segregation treatment to reduce the amount of hazardous mixtures, (3) toxicity reduction, (4) volume reduction and (5) incineration to reduce waste volume, toxicity and mobility.

GARY F. BENNETT

1. *Pretreatment Compliance Monitoring and Enforcement Guidance*, by U.S. Environmental Protection Agency, Office of Water Enforcement and Permits, report published by Government Institutes, Rockville, MD, 1989, ISBN 0-86587-789-0, 139 pp., \$45.

and

2. *Pretreatment Compliance Inspection and Audit Manual for Approval Authorities*, by U.S. Environmental Protection Agency, Office of Water Enforcement and Permits, report published by Government Institutes, Rockville, MD, 1989, ISBN 0-86587-790-4, 112 pp., \$39.

Government Institutes has again, as they often have in the past, made two excellent U.S. Environmental Protection Agency publications available to the regulated entities. These two manuals deal with the Industrial Wastewater Pretreatment Program that regulates the discharge of toxic chemicals (such as heavy metals to the Publicly Owned Treatment Work (POTW)).

The first book, *Pretreatment Compliance Monitoring and Enforcement Guidance*, was written to provide POTWs that operate their own industrial wastewater pretreatment program information about their pretreatment program, implementation and responsibilities, with particular emphasis on compliance monitoring and enforcement activities. The guidance, provided to local POTWs, addresses: (1) industrial user obligations to comply with pollution control requirements, to conduct self-monitoring and reporting, and to report on their compliance status; and (2) control authority responsibilities to implement the pretreatment program, sample and inspect industrial users, determine industrial user and compliance status, take enforcement action, and report to approval authorities.

In addition to a general description of the various regulations of the pretreatment monitoring program, the guidance document assists and guides Control Authorities in implementing the pretreatment program by providing:

- A definition of significant industrial user
- Recommendation on industrial user monitoring frequency
- Guidance on semi-annual reports by industrial users
- A description of the U.S. EPA's "Enforcement Management System" as a guide for control authorities
- A definition of significant non-compliance for industrial users
- A pretreatment performance summary that the U.S. EPA recommends approval authorities make part of their annual report.

The second of the two guidance documents, *Pretreatment Compliance Inspection and Audit Manual for Approval Authorities*, deals with higher approval of authority, that of the U.S. EPA, which regulates and approves the programs of the local POTWs. The pretreatment compliance inspection (PCI) and approval of the pretreatment program audit described in this document have been established to allow on-site review of pretreatment programs of the approved POTWs. The intention of this manual is to provide guidance to U.S. EPA Regional and State personnel who are responsible for conducting PCIs and audits.

Given that both documents deal with governmental programs and authorities, the industrial reader might wonder: "what's in the book for me?". A great

deal, I believe, for the regulated industry should know the goals, limitations and problems faced by the regulators. So I recommend both books, especially the first one to those industrial dischargers who must comply with pretreatment limitations.

GARY F. BENNETT