

*Metal/Cyanide-Containing Wastes; Treatment Technologies*, by S.A.K. Palmer, M.A. Breton, T.J. Nunno, D.M. Sullivan and N.F. Suprenant, Noyes Data Corp., Park Ridge, NJ, 1988, ISBN No. 0-8155-1179-5, 721 pp., \$74.00.

The Resources Conservation and Recovery Act, as amended by the Hazardous and Solid Waste Amendments of 1984, strictly regulates the land disposal of numerous types of hazardous waste, among these being wastes containing metals and cyanides of various concentrations.

The book provides a review of the regulatory background (complying with the above laws) and a summary of the current hazardous waste management data base. The introductory (regulation) background is followed by information on waste minimization, techniques and an evaluation of a wide range of treatment/recovery processes for metal- and cyanide-containing wastes.

Specific chapters include:

- Metal/cyanide waste sources and characterization
- Waste quantity management practices and treatment capacity
- Waste minimization processes and practices
- Membrane separation technologies for metal removal
- Extraction for metal removal
- Adsorption for metal removal
- Electrolytic processes
- Chemical treatment/removal program for metals
- Biological treatment for metal-containing waste
- Thermal destruction/recovery process
- Physical removal processes for cyanide
- Chemical destruction of cyanide
- Miscellaneous cyanide destruction processes
- Consideration for system selection

Because the book was written by a consulting firm as a government report, i.e. by a U.S. Environmental Protection Agency contractor, it is not deep in its treatment of the topic but is a comprehensive survey of the latest techniques and the literature on the topic as well.

Indeed, the book is well-referenced. Those needing information on the topic of cyanide/metal waste treatment will be well-advised to seek out this book. It makes a good beginning.

GARY F. BENNETT

*Dust Explosions*, by W. Bartknecht, Springer-Verlag, Berlin, 1989, ISBN 3-540-50100-2, 270 pp., \$ 80.00.

Dust represents the most hazardous form of solid matter, especially organic and metal dusts. Dust may be considered a phase of its own with very special