

*Thermal Processes: Innovative Hazardous Waste Treatment Technology, Vol. 1*, by H.F. Freeman (Ed.), Technomic Publishing Co., Lancaster, PA, 1990, ISBN 87762-61602, 241 pp., \$ 49.00.

Freeman is a prolific editor and a good one. By my count, this is the fourth book he has edited and one of two I have on hand currently to review. A previous book on the topic was published by Technomic 1987; it is entitled *Incinerating Hazardous Waste*.

The new series by Freeman will contain three volumes. The other volumes will cover innovative technologies in the areas of physical, chemical and biological treatment of hazardous wastes.

For this volume, Freeman has collected 20 diverse papers on innovative thermal treatment (destruction) processes including the following:

- Closed loop detoxification
- Supercritical water oxidation
- Paint sludge drying
- Slagging rotary kilns
- Catalytic incineration
- Pyrolysis
- Low temperature thermal treatment of soil
- Use of oxygen
- Circulating fluidized bed combustion
- Thermal fixation of hazardous metal sludges

Although I did not read all the papers in depth, I did scan the complete book and read with interest several papers. They range from very good, sound scientific papers to commercial pitches. Unfortunately, Freeman did not edit out the gross commercialization (giving the marketing manager's name, address, telephone and fax numbers for further information). Nor did Freeman eliminate inclusion of a couple of biographic sketches.

Finally, I must note that there was no index; a minor, but irritating omission.

GARY F. BENNETT

*Readings in Risk*, by T.S. Glickman and M. Gough (Eds.), Resources for the Future, Washington, DC, ISBN 0-915707-55-1 (alk. paper), 262 pp., paperback 8×10", \$ 24.95 plus \$ 3.00 postage and handling. (Distributed by Resources for the Future, Customer Services, PO Box 4852, Hampden Station, Baltimore, MD 21211.)

The subject of risk, and its analysis and control, is very popular as more attention is given to both human and environmental risks. Resources for the Future is an independent non-profit organization that advances the study of the environment, in the broad sense.

This book is essentially 19 essays on various aspects of risk, each written by one or more experts in their respective areas. It is a very practical and realistic publication; each essay is followed by a page of questions useful for class discussions or further study.

The basic concepts of risk are discussed by four papers which put risk into perspective and raises the question of 'How Safe is Safe Enough?' Each explains why there are no absolute answers.

Risk comparison section contains three papers, one on the daily risks of life, one on rating risks, and a lengthy review of ranking possible carcinogenic hazards. Two new markers, the toxic dose for 50% of animals tested and HERP (human exposure dose/rodent potency dose) are introduced to aid in risk comparisons but both are subject to further study.

Passing to regulatory issues, three essays discuss the role of regulatory efforts in the public interest and relates to cost/benefit considerations.

The health risk assessment group contains three essays noting that assessing risks from health hazards is a very imperfect science, with examples of food safety and solvents such as benzene.

Technological risk assessment explores three cases histories of social benefit versus technological risk analyses, including the assessment of the potential risks involved in a port facility to handle LNG (liquid natural gas).

Overall, this book presents an excellent review of risk as seen from several viewpoints, and gives the reader numerous references and citations to back-up the statements made by the authors. It is highly recommended to anyone sincerely interested in the understanding and control of risks—both technical and 'realworld'.

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