

*Introduction to Hazardous Waste Incineration*, by L. Theodore and J. Reynolds, John Wiley and Sons, Inc., New York, NY, 1987, ISBN No. 0-471-84976-6, 432 pp., US\$49.95.

Hazardous waste landfills are unwanted in neighborhoods, and establishing new disposal sites is becoming difficult if not next to impossible. Waste must be disposed of by other methods than landfilling if its production cannot be avoided. Incineration is the preferred treatment process (in my opinion) for organic wastes; but incineration is not without its own problems as burning produces (or potentially produces) secondary pollutants itself – products of incomplete combustion and a residual ash, that cannot avoid being landfilled.

The flyer, describing the book, notes that “it stands above as both a reference and as a text on one of today’s most critical environmental topics”. I cannot vouch for the book’s statement as a reference book but I do strongly feel it would make an excellent text. The book is well written and fundamentally sound. Its text is well sprinkled with example calculations and problems to be worked by the student using the book.

The flyleaf of the book describes its contents well: “Introduction to Hazardous Waste Incineration” examines the basic concepts, principles equipment and application pertaining to hazardous incineration.

The text is divided into four parts, including:

- The Hazardous Waste Problem. An overview of the subject including a review of current standards and regulations. Also provides a separate chapter on other options for controlling hazardous waste.
- Incineration Problems. Covers basic concepts terminology, stoichiometric calculations and thermochemical and problem design considerations.
- Equipment. This part (of the book) is essentially a “walk through” of a hazardous waste incineration facility, sequentially examining the incinerator waste heat boiler, quencher, air problem control equipment, and ancillary equipment.
- Facility Design – Includes a presentation of design principles followed by two extensively illustrated examples detailing the process design of waste facilities.

The book appears to be fundamentally sound and is combined with a good, practical look at the hardware involved in incineration. Indeed, the air pollution control chapter is up-to-date with even ionizing wet scrubbers being described. The only major reservation (or criticism) I have is the lack of inclusion of data from operating systems. The author could, I believe, have described a couple of operating incinerators and given all the pertinent operating and monitoring data available. This addition would have been very useful.

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