

## Book reviews

**Frank R. Spellman, Nancy E. Whiting (Eds.), Safety Engineering: Principles and Practices, 2nd ed., Whiting, Government Institutes/Scarecrow Press, Lanham, MD, 2005, 598 pages, US \$99.00, 84 × 11 format, ISBN: 0-8 6587-970-2.**

Information provided in the preface of this book vividly illustrates the importance of worker safety, at least from an economic perspective through the provision of the following data: the estimated cost according to the US National Safety Council of work injuries in the United States was \$132 billion (or \$970/worker) in 2001; there were approximately 5300 workplace fatalities from unintentional injuries; and 50 million work days were lost that year.

The authors state: “The primary intent of this work is for use as a textbook in engineering, safety engineering, and science courses.” The text “. . . is also designed for use by practicing engineers in the field as a ready reference handbook – for the professional who wants an overview of the fundamentals and insight into the subtleties of this expanding discipline.”

The book contains 42 chapters covering all aspects of safety in the industrial setting. Job safety discussed ranges from the office environment to construction site safety.

More of interest to the readers of this journal are chapters entitled: respiratory protection, emergency response, fire and safety hazard communication, hazardous waste handling, pressure vessels, noise hazards and hearing conservation, radiation safety, and indoor air quality.

The chapter on emergency response began with an intriguing description of a chlorine release at a waste treatment plant. Fifty-five tons of chlorine was released in a short period of time; a fire ensued subsequently. One person at the plant died and numerous students at a nearby college were hospitalized and three eventually succumbed as a result of the chlorine release. If the description of this incident does not get the reader’s attention, nothing will. [As an aside, I might note that as I was reviewing this book there was a major chlorine release from a railroad tank car in the United States. Nine people died as a result. Numerous others were hospitalized.] After describing the chlorine incident, the authors go on to discuss emergency response albeit it briefly by listing the elements involved in the process.

Chapter 23 entitled “Hazardous Waste Handling” was written with a view to illustrating the hazards of handling hazardous materials in addition to hazardous waste. This chapter, like most others, is brief and to the point. Although the chapter is not designed for experts, it does have short sections covering the topic. Chapter subheadings include the following: What is a hazardous substance? What is a hazardous waste? Where do hazardous wastes come from? Why are we concerned about hazardous wastes? and hazardous waste legislation (RCRA, CERCLA, and OSHA).

All chapters end with a summary. To illustrate, I include the summary from the chapter discussed above:

While the technology to handle, control, and remediate hazardous wastes and their consequences is constantly improving, the problem continues to grow with the growth of population and industry. As safety engineer, you may hold responsibility for such materials for your organization. Because it affects workers, the surrounding community and the environment, it presents the safety engineer with a special challenge and a critically important concern.

In addition to a summary, a list of review questions, references, and suggested readings are found at the end of each chapter. However, I was not impressed by the reading list at the end of the just quoted chapter. The books listed were decidedly out of date with the most recent being over 10 years old. A more critical comment could be made regarding the suggested reading for the chapter dealing with hazardous chemicals. The two suggested books were more than 20 years old.

Those criticisms aside, I enjoyed reading the book and would be willing to adopt it for a safety engineering course were I to teach one, but with the provision of more up-to-date references.

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