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R.L. Brauer, Safety and Health for Engineers, second ed., Wiley-Interscience, Hoboken, NJ, 2006 (764 pages, US\$ 94.95, ISBN 0-471-29189-7).

The author of this book, Brauer, caught my attention early in the introduction with the following comment: "Although life has improved and has been extended, citizens of the United States pay a high price for their high-technology lifestyle. Each year there are more than 100,000 accidental deaths, and nearly 10 million disabling injuries. The cost of all accidents in the United States is approximately US\$ 600 billion annually, excluding some indirect costs and the value resulting from pain and suffering." Later, the author notes that there are approximately 4500 work-related deaths each year (this is a death rate of 3 people per 100,000 for all industries) and 35 million injuries involving one or more days away from work. Brauer notes: "The total cost in lost wages, medical expenses, insurance, fire losses, and other indirect costs associated with these work-related accidents is more than US\$ 150 billion annually." Lost time due to accidents amounts to 100 million lost work days per year.

Engineers have, according to Brauer, "... an important role in reducing risks placed on society by modern technology, its products, and its wastes. Although engineers cannot bear the total blame for safety and health risks, engineers are able to help reduce them to levels acceptable to society. In planning, design operations, maintenance, or management activities, engineers should be able to recognize hazards and implement controls for them. Engineers should know how to eliminate, reduce, or control safety and health risks within their sphere of responsibility."

Towards this goal, Brauer has written a comprehensive guide that helps engineers reconcile safety and economic concerns using the latest cost-effective methods of insuring safety in all facets of their work.

He accomplishes this goal in 38 well-written chapters which are divided into five main sections as follows with the number of chapters in parentheses:

1. Introduction (3).
2. Laws, regulations, and standards (5).
3. Hazards and their control (22).
4. The human element (3).
5. Managing safety and health (5).

I was impressed by the comprehensive coverage with topics that ranged from machine safety to safe trenching and from lock-out/tagout to preventing falls. However, I presume readers of this periodical would focus on other concerns if they were to purchase this book such as transportation of hazardous materials; fire protection, prevention, and suppression; flammable materials, explosions, and explosives; and ionizing and nonionizing radiation. Incidents at Three Mile Island and Chernobyl were reviewed. Also discussed were biohazards such as *Legionella pneumophila*. This section also had chapters that reviewed hazardous wastes (past disposal problems, definition, control, treatment, and disposal) and personal protective gear. The foregoing are only a few of the many topics in this area that were discussed.

I have only briefly, perhaps too briefly, noted a few of the many safety hazards discussed in this book. My review probably is not sufficient enough for the comprehensive treatment of the topic provided by the author, but with the book having over 700 pages, to do otherwise would make this review much too long. The book is well written, easy to read, and wide in scope.

Finally, the author provides four end sections for each chapter. They are:

1. Exercises.
2. Review questions.
3. Notes (which really are mainly bibliographic entries).
4. Bibliography.

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