Book Review

Baker, W. E., Cox, P. A., Westine, P. S., Kulesz, J. J., and Strehlow, R. A., *Explosion Hazards and Evaluation,* Elsevier, Amsterdam, 1983, xxvii + 807 pp. plus charts, $159.50.

For several years these authors have presented a short course pertaining to the subject matter of this book. As a result, they have produced what will undoubtedly become the classic reference in this field for years to come. The work is encyclopedic, well organized, and easy to use.

The book begins with a discussion of combustion and quickly moves to a specialized discussion of rapid combustion processes, which can be considered to be explosions. Explosions can be detrimental because of the resulting overpressure, missiles, and thermal radiation. The book then proceeds to discuss each of these areas in considerable detail. The dynamics in the free field for both ideal and nonideal sources is first presented and then subsequently the loading that results from the blast waves. The response of structures to this loading is examined, using P-I diagrams, in considerable structural response detail. The production of fragments and their trajectories is considered next, along the thermal radiation emitted by some explosive events.

The concluding chapters discuss blast damage tolerances and design considerations for survivability. Several appendices provide supporting details for segments in the text. One of the outstanding features of the book is its most complete bibliography; every major publication pertinent to the area seems to be given. If one has a need to obtain information concerning explosions and their effects, this book would indeed be the choice.

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