

This text provides a counterpoint view to the intentionally alarmist, uninformed journalism employed by some of the "anti" lobby where personal opinions are frequently equated with fact. Review of this publication will show that critical questions, such as how much radiation is really harmful, remain unanswered. In spite of the extensive studies of the effects of ionizing radiation, there is still more to learn, and further research in the effects of low-level ionizing radiation exposures is dictated.

While on the staff of the University of Missouri Research Reactor, Dr. Schlapper was involved with the Operational Health Physics Program. He also served as a research fellow in the Nuclear Medicine Department of the Harry S Truman Veterans Administration Hospital. In January of 1981, Dr. Schlapper joined the faculty of the Radiological Health Engineering Program of the Nuclear Engineering Department at Texas A&M University. He also serves on the consulting faculty of the Nuclear, Biological and Chemical Protection Branch of the U.S. Army Academy of Health Sciences.

The Dynamics of Explosion and Its Use

Author Josef Henrych
Publisher Elsevier/North-Holland, Inc., New York (1979)
Pages 558
Price \$107.25
Reviewer Jerzy R. Moszynski

This is a very unusual book. It attempts to present in nine chapters a wealth of information on the origin and development of explosion-caused stress waves, the damage due to them, design for protection, engineering use of explosions and, finally, calculation methods for deformations in various types of materials and structures.

The coverage is very uneven. At one extreme are very detailed calculation procedures in Chaps. 7 and 8 of elastic and elastoplastic deformations of elements and structures under a wide variety of impulsive loadings. At the other is the very terse presentation of fundamental aspects of stress wave theory and explosion effects in a medium in Chaps. 1 and 2, and the discussion of explosions in air and water and their effects in Chaps. 3 and 4, respectively. Here, difficult concepts are presented without discussion, equations and their solutions are written down, often with reference to publications not easily accessible. Perhaps the most extreme example is Sec. 2.9 on nuclear explosions, which contains some elements of kinetic theory, quantum mechanics, and radiation that are never used again and are simply written down. In between are Chaps. 5 and 6, which contain a great deal of empirical data and calculation procedures dealing with the use of explosions in excavation, earthwork, metal forming, etc., and in demolition, respectively. An excellent chapter on the seismic effects of explosions concludes the text.

The compilation of empirical data and calculation procedures is one of the best features of the book and will appeal to the designer and practicing engineer. The theoretical treatments are a little more disappointing and may not even serve as a useful starting point for someone embarking on the solution of a specific problem. This is due to the references being mostly Russian books, many not easily accessible. There are practically no references to Western technical journals; some books are listed, however. Even references to Soviet or Eastern European journals are scarce, and almost 15% are to the author's own work. Very few of the references are more recent than 1970.

The text, while terse in places, is understandable with a few exceptions. The translation is competent with very few linguistic lapses. The notation used, largely unfamiliar to an American reader, is very complex. The list of symbols occupies 14 pages. This hardly contributes to ease of reading.

In summary, the book will probably be a useful reference for practicing engineers and may provide a source of information on Soviet and East European work (albeit not too recent) in the field.

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Gas Turbine Combustor Design Problems

Editor Arthur H. Lefebvre
Publisher Hemisphere Publishing Corporation, New York (1980)
Pages 431
Price \$45.00
Reviewer M. R. Bottaccini

A book dedicated to combustion chamber design is an unlikely source of information for nuclear engineers, especially a book such as this one, the heterogeneous proceedings of a meeting held at Purdue University in 1978. Such "workshops" are full of bombast and intellectual noise with nearly vanishing information content. And yet there are compensations even for the nuclear engineer whose work, we are told on p. 87, is being diminished by "the well-publicized opposition to nuclear power," which