

SOMETHING FROM AND FOR ALMOST EVERYONE

Title Industrial Radioisotope Economics, Technical Reports Series No. 40

Publisher IAEA, Vienna, Austria, 1965

Pages 549 + 27

Price \$11.50

Reviewer Alan Beerbower

This is not an easy book to review in the conventional manner, as it consists largely of reports from the 25 participating nations. These are followed by a series of seven "Technical and Economic Summaries" by individual authors, each of whom takes an international look at his specialty. Onto this is tacked a prediction of future trends indicated by present research, a panel discussion of "Obstacles to an Increased Use of Radioisotopes," and a brief conclusion. One might instead write a review on each of the four main sections, and this is, in fact, what is attempted here.

Section II, The National Reports, including the Introduction, Conclusions and the Questionnaire (Appendix I) are the necessary hardware, and can only be regarded as reference material. No one with an ordinary mind would be capable of reading straight through these reports and coming to any conclusion except that "there is a lot going on." To a person with a specific interest in a given country, that report will be found to be remarkably complete, concise, and to the point. For example, take Argentina (as first in line), and you obtain a fine picture of rapid and healthy growth in a country where the pace of such progress is greater than might be expected. This is illustrated in three tables and a summary. However, continuing through the alphabet to Yugoslavia becomes unbearable, as each country has naturally arrived at the same solutions to the same problems. The Introduction does a good job of reducing these reports into a common basis.

Section III, on the other hand, is eminently readable. Here each expert author has undertaken to analyze Section II in terms of a specific group of applications. The results are most impressive; the analysis is technical as well as economic, and anyone who is interested in the design, selection, or use of radioisotope equipment can find a wealth of information. If published alone, this section would constitute an excellent text for a course in current practices. All the articles, of course, also carry complete economic analyses from Section II. Not all, however, are equipped with bibliographies; these vary from none on gauging, to 104 on tracing. One problem area should be mentioned: The article on "Massive Irradiation" is not only short (eight pages) but seven of the pages are in French. It would seem that a translation of this one section could and should have been provided, especially since most of the applications cited are in English-speaking countries. On the whole, these articles are very

adequate, and location of the specific item wanted is not too difficult; nevertheless, one obvious improvement would have been the inclusion of an index.

Section IV, unlike the previous articles, is not international in scope but merely presents the USAEC program and its implications for future applications. A few pages of discussion at the end do broaden the viewpoint. Perhaps no one person in the world could give a truly international picture, and E. E. Fowler was certainly a good choice to present what is undoubtedly the largest program in the participating countries.

Section V presents a transcript of a panel discussion, including several of the authors of the above articles, on the obstacles to greater progress. It is not easy to read, nor to find specific points; like all such transcripts, it is disjointed and redundant. A condensation would have served the purpose far better (but I would not care to have to be the one to prepare it). Certainly, several important points are available to the diligent reader.

The Conclusions (Section VI) are admirably brief and to the point; the "Global Savings from Radioisotope Use" of between \$296 and \$400 million is adequately explained and qualified as to its uncertainties. The fact that 1961, 1962, and 1963 figures have had to be used is taken into account.

To summarize, one might consider that we have bound together a weighty reference source, a text book on modern uses of radioisotopes, and an economic analysis of the global situation. One or another of these aspects should certainly appeal to virtually every reader of NUCLEAR APPLICATIONS.

Alan Beerbower has been employed since 1936 by various affiliates of the Standard Oil Company (N.J.) in New Jersey and Maryland, and has been at the Esso Research and Engineering Company in Linden, N.J., since 1958. He became Radiological Safety Officer at the Baltimore Refinery in 1954, where he carried out an extensive program; he is now one of the five such officers at Esso Research. He is co-authoring a book for early 1966 publication on "Radioisotope Engineering" (Reinhold Publishing Co.). A 1935 graduate of California Institute of Technology, he also has a Master's degree (chemical engineering) from Columbia University.

THE PHENOMENOLOGY OF FRICTION

Title Friction and Wear of Materials

Author Ernest Rabinowicz

Publisher John Wiley & Sons, Inc., 1965

Pages x + 244

Price \$12.00

Reviewer James M. Galligan