

Book News

1. Book review

● *Legal and institutional arrangements in minerals development*. Edited proceedings of a workshop organized jointly by the UN. Department of Technical Co-operation for Development and the German Foundation for International Development (DSE), held in Berlin in August 1980. London, Mining Journal Books, 1982. Soft, 228 × 149 mm, xi + 223 pp. Approx. R30 + GST.

Reviewer: M. J. Martinson

The book contains 23 papers presented at a workshop held in West Berlin in 1980 to discuss relationships arising out of the exploitation of mineral resources in Developing Countries by, or with the assistance of, private and public institutions in developed market economies. The papers printed in languages other than English have been translated and edited for publication in the present volume.

The workshop was a sequel to earlier conferences on allied topics, and, since the subject is clearly controversial, there can be no finality on the issues raised at the workshop. It can be noted, moreover, that most of the participants attending the Berlin workshop represented Third World governments or international agencies of one genre or another. Transnational mining corporations seem to have been conspicuous by their absence.

The papers are arranged in four parts headed

1. Mineral development issues and policies
2. Mining legislation and mineral development contracts
3. Mineral development agreements: risk and security
4. International and national programmes and projects.

The part headings give a better impression of the contents than the title, particularly as legal aspects in the strict sense do not figure at all prominently in the proceedings. As with most conference proceedings, the quality of the papers varies considerably, but there is much of interest to the mineral economist and there are a few papers that may be of more general interest. In the latter category, Faber's paper on mineral royalties and taxation in part 2 contains a succinct review of some of the more common devices used by the governments of Developing Countries to extract their pound of flesh from mining ventures, and the four papers on risk and security in part 3 can likewise be singled out as being of general interest.

The book includes, in part 4, a number of case studies relating to the exploitation of specific mineral deposits in Developing Countries, of which the critical essay by Tibone of the Botswana Ministry of Mineral Resources and Water Affairs on the renegotiation of the Selebi-Phikwe contract will be of particular interest to the South African mining houses involved in the exploitation of mineral resources in neighbouring territories. Although other studies in this part of the book are more remote in a geographical sense, they may nevertheless contain valuable lessons for institutions debating whether to in-

vest in mining projects in Developing Countries.

The book is unlikely to appeal to a wide audience in the South African minerals industry, but should certainly be perused by mineral economists and others involved in negotiations to obtain exploitation rights in Developing Countries. For mining-house and other specialist libraries, it represents a useful addition to the limited literature now available on international aspects of mineral economics.

2. New books

● *Strength of metals and alloys (ICSMA 6)*. R. C. Gifkins (Editor). New York, Pergamon, 1982. Approx. 1200 pp. 3 vols. U.S. \$220.

These volumes contain the proceedings of the 6th International Conference, held in Melbourne in August 1982. There are over 170 technical and review papers, which form an authoritative, current state-of-the-art review of this important subject. The three-volume set provides a comprehensive, timely, and readily accessible source of information on all facets of the field. They will be of interest to metallurgists, materials scientists, physicists, and mechanical, civil, and structural engineers.

● *Deformation-mechanism maps. The plasticity and creep of metals and ceramics*. H. J. Frost and M. F. Ashby. New York, Pergamon, 1982. Approx. 250 pp. U.S. \$60.

This volume describes the deformation mechanisms, and the construction of maps that show the field of stress, temperature, and strain rate over which each is dominant. It presents, with extensive documentation, maps for more than 40 materials covering pure metals, ferrous and non-ferrous alloys, covalent elements, alkali halides, carbides, and a large number of oxides. Further developments (including transient behaviour, the influence of pressure, behaviour at very low and very high strain rates) and the problem of scaling laws are described, and a series of useful case studies is included to illustrate the application of the maps to engineering problems. This book will be of interest to the researcher, engineer, and senior student in metallurgy, materials science, and engineering; also to the geologist and geophysicist.

● *Pressure diecasting, Part 2. The technology of the casting and the die*. D. F. Allsop and D. Kennedy. New York, Pergamon, 1982. \$ U.S. 27.50.

This volume focuses on the design of the die and the effects of the materials and processes used in diecasting on the quality of the product. It presents the latest methods for designing the feed system of the die; the use of computer design methods; the findings of the most recent die-lubrication trials and analysis of die failures. Automation of the diecasting process, finishing of castings, die materials, technical training, and health and safety aspects are also covered. It will be of interest to technicians, industrial apprentices, and engineering students.