

BOOK NEWS

- *Proceedings of the Third European Conference on Mixing, York England, 1979*, edited by H.S. Stephens and C.A. Stapleton. Bedford (England), BHRA Fluid Engineering, 1981. 2 vols., 500 pp. US \$50.

Volume 1 gives the papers presented at the Conference, and Volume 2 gives the edited discussion. BHRA's address is as follows: Publication Sales, BHRA Fluid Engineering, Cranfield, Bedford, MK43 OAJ, U.K.

- *Hydrocyclones*, edited by H.S. Stephens and G. Priestley. Bedford (England), BHRA Fluid Engineering, 1981. £30.

This volume reproduces the papers presented at an international conference that was held in Cambridge (England) in October 1980. BHRA's address is given above.

- *Handbook on continuous casting*, by E. Herrmann and D. Hoffmann. Düsseldorf, Aluminium-Verlag, GmbH., 1980. 742 pp. DM1250.

The various inventions that have appeared since 1958 are classified systematically according to various criteria. The first part 'Technologies and Installations' contains a summary of the state of the art. The second part, 'Patent Descriptions', contains reports on over 3700 of the inventions from throughout the industrialized world that are in any way connected with continuous casting and that were published between 1958 and 1974. The third part, 'Equivalent Patents', contains, in tabular form under the number of the relevant patent description, a list of the national patents that have been granted to a given invention in various countries, together with the patentee and the inventor.

- *Canadian Government Publications*.

The following reviews of the activity and developments during 1979 in regard to the chief minerals produced or consumed in Canada are available at \$1 per copy from the Canadian Government Publishing Centre, Supply and Services Canada, Hull, Quebec, Canada K1A 0S9. They were prepared by members of staff of the Mineral and Energy Policy Sections.

Antimony, by J.J. Hogan, 8 pp.

Asbestos, by G.O. Vagt, 11 pp.

Barite and Celestite, by G.O. Vagt, 7 pp.

Bentonite, by G.O. Vagt, 5 pp.

Bismuth, by J.J. Hogan, 6 pp.

Cement, by D.H. Stonehouse, 15 pp.

Chromium, by D.G. Law-West, 6 pp.

Clays and Clay Products, by G.O. Vagt, 12 pp.

Nickel, by M.J. Gauvin, 13 pp.

Phosphate, by G.S. Barry, 9 pp.

Salt, by G.S. Barry, 9 pp.

Sand and Gravel, by D.H. Stonehouse, 6 pp.

Silica, by B.W. Boyd, 7 pp.

Silver, by J.J. Hogan, 28 pp.

Stone, by D.H. Stonehouse, 18 pp.

Zinc, by D.H. Brown, 18 pp.

- *World mineral trends and U.S. supply problems*, by L.L. Fischman. Baltimore, Johns Hopkins University Press, 1980. 596 pp. \$15

The study presents trade and price trends from the 1950s to the year 2000 for seven nonfuel minerals—manganese, chromium, cobalt, aluminium, copper, lead, and zinc—in each of their major feedstock forms. Demand and supply projections for commodity forms are derived from individual projections for the industrialized countries, and from the supply potential among their principal suppliers. Price projections are based on demand and supply prospects in the groups of countries that account for the bulk of each commodity's world trade.

- *Standards issued by the International Organization for Standardization (ISO)*. Recent issues of ISO include a series of international standards covering the most-important ferro-alloys usually supplied for steel-making and foundry use. Each deals with the information required upon ordering, requirements for the ferro-alloy itself, and testing. The requirements include constitution of the consignment (tapped, graded, or blended lot methods), chemical composition, and particle-size ranges. Examples of appropriate international regulations pertaining to packaging, storage, and transport are included, compliance with these being a required part of each standard. These standards, each carrying the subtitle *Specifications and conditions of delivery* are as follows: ISO 5445 *Ferrosilicon* ISO 5446 *Ferromanganese*, ISO 5447 *Ferrosilicomanganese*, ISO 5448 *Ferrochromium* ISO 5449 *Ferrosilichromium*, ISO 5450 *Ferrotungsten*, ISO 5451 *Ferrovandium*, ISO 5452 *Ferromolybdenum*, ISO 5453 *Ferroniobium*, and ISO 5454 *Ferrotitanium*, ISO 6501 *Ferronickel: technical conditions of delivery* was also issued recently.

- *Proceedings of the 2nd International Symposium on Geology and Geochemistry of Manganese*, edited by I.M. Varentsov and G. Grassely. Stuttgart, E. Schweizerbart'sche Verlagsbuchhandlung, 1980. 3 vols. DM 264 or U.S. \$153.20

Volume 1:

Mineralogy, Geochemistry methods. 464 pp. DM 96 or U.S. \$55.80

Volume 2:

Manganese deposits on continents. 504 pp. DM 96 or U.S. \$55.80

Volume 3:

Manganese on the bottom of recent basins. 342 pp. DM 88 or U.S. \$51.20

In August 1976 the 2nd International Symposium on the Geology and Geochemistry of Manganese, arranged by the Commission on Manganese of the International Association on the Genesis of Ore Deposits (IAGOD), and the IGCP Project No. 111, was held during the 25th International Geological Congress in Sidney, Australia. This three-volume work is in essence the proceedings of the symposium, but many topics are dealt with in greater detail. At the symposium only the main papers dealing with the important achievements in geology in the last two decades were presented.

Jet Cutting

BHRA Fluid Engineering will hold its Sixth International Symposium on Jet Cutting Technology at the University of Surrey, England from 6th to 8th April, 1982.

Recent developments in techniques and equipment have resulted in an increasing number of applications for high-pressure water jets. Uses range from the cutting of steel plate, underwater cleaning of offshore structures, hydraulic coal mining, and the precision cutting of complicated shapes for the shoe industry to the high-speed cleaning of grippers on a 'Swiss roll' production line. Water jetting offers environmental benefits, eliminating dust and avoiding the problems associated with thermal techniques in potentially dangerous surroundings such as coal mines and offshore oil platforms. Additional applications for the technique, and future developments will be discussed at this meeting.

The subjects to be covered are listed below, but 'state of the art' reviews will be offered in addition to those reporting new developments.

- Fluid mechanics of jets
- Basic cutting studies
- Design, testing, and operation of equipment
- Safety measures
- Applications in industry, civil engineering, mining, and tunnelling
- Special applications, including jet cleaning
- Water-abrasive cleaning and cutting systems
- Environmental and economic aspects

Enquiries should be addressed to the Conference Organizer, 6th Jet Cutting, BHRA Fluid Engineering, Cranfield, Bedford MK43 OAJ, England. Telephone: (0234) 750422. Telex: 825059.

Mixing

BHRA Fluid Engineering, in conjunction with the European Federation of Chemical Engineering, the Institution of Chemical Engineers, KNCV, and KIVI, will hold the fourth European Conference on Mixing in Noordwijkerhout, Netherlands, from 27th to 29th April, 1982.

Mixing technology has important implications throughout the process industries, ranging from oil and chemical plants to food manufacturers. In the face of increasing raw-material and labour costs, plus more rigorous safety legislation, companies are constantly searching for ways to increase the efficiency of their plants. Investigations into agitation equipment, for example, have shown that shafts are frequently oversized, and are therefore wasteful of materials and energy. The meeting will provide an opportunity for the discussion of recent developments, together with the underlying theories.

The subjects to be covered are listed below, but related topics will be considered.

- Mixing technology of systems: solid—liquid—gas, liquid—gas, solid—liquid, liquid—liquid
- Mixing of fluids of complex rheology including the

dispersion of low-viscosity fluids into fluids of high viscosity

- Fluid loading on agitators or mixing vessels
- Mixing of fluids during flow through equipment
- Powder mixing in static and agitated mixers
- Equipment parameters such as: efficiency, economics, design, construction, operation, selection, and application.

Further details are available from the Organizing Secretary, 4th Mixing Conference, BHRA Fluid Engineering, Cranfield, Bedford, MK43 OAJ, England. Telephone: Bedford (0234) 750422. Telex: 825059.

Tunnelling

The third Tunnelling Exhibition in Great Britain will be held in 1982 in conjunction with two major meetings of the world's leading tunnelling authorities at Brighton.

The Tunnelling 82 International Exhibition will open on Monday 7th June, to allow the maximum opportunity for attendees at both conferences to visit the stands. This is a change from the Tuesday opening previously announced. It will be open daily until Friday, 11th June.

The International Symposium 'Tunnelling 82' will take place from Tuesday to Friday, 8th to 11th June. It will be preceded by the 8th Annual Meeting of the International Tunnelling Association, which opens on Sunday, 6th June, and closes with a joint session with the Symposium on Wednesday, 9th June, 1982. The Symposium is again organized by the Institution of Mining and Metallurgy with the co-operation of the British Tunnelling Society, the Institution of Mining Engineers, and the Transport and Road Research Laboratory, Department of Transport.

All enquiries for 'Tunnelling 82' should be addressed to the Meetings Secretary, The Institution of Mining and Metallurgy, 44 Portland Place, London WIN 4BR. Telephone: 01-580 3802. Telex: 261410 IMM G. All enquiries for the Exhibition should be addressed to Mr Christopher Bradley, CB Technical Exhibitions Ltd, 78 Vineyard Hill Road, Wimbledon Park, London SW19 7JJ. (Telephone 01-946 3471. Telex 22914 CCC G relay Christopher Bradley.)

Hydrotransport 8

The Eighth International Conference on the Hydraulic Transport of Solids in Pipes is to be held in Johannesburg from 25th to 27th August, 1982. It will be held at the Rand Afrikaans University. The Conference is being organized by the British Hydrodynamics Research Association (BHRA) in conjunction with a South African Committee comprising representatives of the SAICE, SAIME, SAIMM, and CSIR.

A limited number of South African papers are invited. Abstracts should be submitted for approval to the South African Organizing Committee, c/o Mr R. Williamson, P.O. Box 31176, Braamfontein 2017, by 30th September 1981. Completed papers up to 5000 words long will be required by 28th February, 1982. The emphasis of the Conference will be on practical aspects such as mining and tailings transport, operation, equipment, and economics.

There will be a simultaneous exhibition of equipment, a preceding course, and post-conference tours.