BOOK SECTION

New Publications

Copper and Copper Alloy Plating, *by* R. Pinner, published by Copper Development Association, London, 2nd. ed., 11sh 6d.

Molten Salt Chemistry, *by* M. Blander (Ed.), published by Interscience Publishers, New York-London, 1964, 775 pages, 188 sh.

Tin in Social and Economic History, *by* E. S. Hedges, published by Edward Arnold (Publishers) Ltd., London, 210 pages, 40 sh.

Introduction to Thermodynamics, *by* D. C. Spanner, published by Academic Press, New York-London, 1964, 278 pages, 47 sh. 6d.

Symposium on Chemical Engineering in the Metallurgical Industries, published by the Institution of Chemical Engineers, London, 1964, 147 pages 70sh.

Introduction to Electroanalysis, by L. L. Le Veson, published by Butterworths, London 1964, 120 pages, 15sh.

Industrial Paints—Basic Principles, by L. A. Tysall, published by Pergamon Press, Oxford, 1964, 238 pages, 35sh.

EDTA Titrations—An Introduction to Theory and Practice, by H. A. Flaschka, published *by* Pergamon Press, Oxford—London, 2nd ed., 1964, 144 pages, 80sh.

Proceedings of the "Journees Internationales Des Applications Du Cobalt" (International Conference on the Applications of Cobalt, Brussels, June 1964), published *by* Centre D'Information Du Cobalt, Brussels, 1965, 410 pages $5.50.

Corrosion Testing Procedures, *by* F.A. Champion, published *by* Chapman and Hall Ltd., London, 2nd ed., 1964, 496 pages, 65sh.

Industrial Electrostatic Precipitation, *by* H. J. White, published by Pergamon Press, Oxford, 1963, 376 pages, 94sh.

The Physical Chemistry of Paints, by P. M. Fisk, published by Chemical Publishing Co. Co. Inc., New York, 133 pages, $4.75.

Proceedings of the Industrial and Process Heating Symposium, London, June 1963, published by Factory Publications Ltd., London 1963, 3 volumes—Metal Heat Treatment; High Temperature Processes; Furnaces. £3 sh3 each volume.

The Materials Background to Space Technology, *by* A. J. Kennedy, published by George Newnes Ltd., London, 1964, 206 pages.

Amperometric Titrations, by J. T. Stock, published by John Wiley and Sons Inc., New York, 1965, approx. 672 pages, approx. $25.

Handbook of Applied Instrumentation, *by* D. M. Considine (Ed. in-chief), published McGraw-Hill Book Co., New York, 1180 pages, $32.50

Publications Received

CSIR News, Vol. 15, No.3, 4-9, 1965, New Delhi.

British Patents, Division H 1, Patent Office, London.

Insdoc List—Current Scientific Literature, Vol. 12, No. 5-9, 10, 1965, New Delhi.

Materials Protection, Vol.4, No. 1-3, 1965, NACE, Houston.

Corrosion Technology, Vol. 12, No. 1-3, 1965. Grampian Press Ltd., London.

Corrosion, Vol. 20. No. 12, 1964; Vol. 21 No. 1, 2, 1965, NACE, Houston.

Un Weekly Newsletter, Vol. 13, No. 10-22, 1965, UN Information Service, New Delhi.

OSU Research Review, Vol. 1, No. 4-6, 1964, The Ohio State University, Columbus, Ohio.

Inco-Mond Nickel, No. 10, 1965, The International Nickel Co. Ltd., London.

International Nickel Magazine, No. 26, 1965, The International Nickel Co. Ltd., London.

Battelle Technical Review, Vol. 14, No. 1-3, 1965, Battelle Memorial Institute, Columbus, Ohio.

Statistics of World Trade in Steel 1963, published by United Nations, New York, 1964, 43 pages.

Zinc Abstracts, Vol. 22, No. 12, 1964; Vol. 23, No. 12, 1965, ZDA, London, through Indian Lead Zinc Information Centre, Calcutta.

Australian Journal of Applied Science, Vol. 15, No. 3, 1964, CSIRO, East Melbourne.

ISI Bulletin, Vol. 17, No. 1, 2, 1965, New Delhi.

Electro-Technology, Vol. 8, No. 5, 6, 1964; No. 1, 1965, Society of Electronic Engineers, Bangalore.

Science and Engineering, Vol. 17, No. 12, 1964; Vol. 18, No. 2-4, 1965, ISE, Calcutta.

The Nickel Bulletin, Vol. 37, No. 12, 1964; Vol. 38, No. 1-2, 1965, The International Nickel Co. (Mond) Ltd., London.

Corrosion Prevention and Control, Vol. 12, No. 2, 3, 1965, Scientific Surveys Ltd., London.

Chemical Age of India, Vol. 16, No. 3, 4, 1965, Technical Press Publications, Bombay.

Industrial Finishing, Vol. 17, No. 200, 201, 1965, Arrow Press Ltd., London.

Metal Finishing Journal, Vol. 11, No. 122, 123, 1965, Fuel and Metallurgical Journals Ltd., London.

NML Technical Journal, Vol. 7, No. 1, 1965, Jamshedpur.

Cobalt, No. 26, 1965, Centre D'Information Du Cobalt, Brussels.

Australian Chemical Engineering, Vol. 6, No. 1-3, 1965, North Sydney, N.S.W.

Metal Finishing, Vol. 63, No. 1-3, 1965, Metals and Plastic Publications Inc, Westwood, N.J., U.S.A.

Lead Abstracts, Vol. 4, No. 12, 1964; Vol. 5, No. 1, 1965; LDA, London, through Indian Lead Zinc Information Centre, Calcutta.

Quarterly Bulletin of Steel Statistics for Europe, Vol. 15, No. 3, 1965, United Nations, New York, through U.N. Information Centre, New Delhi.

Symposium on Peak Load Coverage, Vol. 2, Economic Commission for Europe, United Nations, New York, 1964, 97 pages, $1.50, through UN Information Centre, New Delhi.

Review of Metal Literature, Vol. 22, No. 1, 2, 1965, ASM, Metals Park, Ohio, U. S. A.

Advanced Physico-Chemical Experiments, *by* J. Rose, published by Sri Isaac Pitman & Sons Ltd., London, 1964, 414 pages 50sh.

Selected Topics in Modern Chemistry—(1) J. H. Hildebrand: An Introduction to Molecular Kinetic Theory, (2) T. Moeller: The Chemistry of the Lanthanides, (3) H. Eyring and E. M. Eyring: Modern Chemical Kinetics, (4) C. A. Vanderwerf: Acids, Bases and the Chemistry of the Covalent Bond, (5) G. E. Ryschkewitsch: Chemical Bonding and the Geometry of the Molecules, (6) H. H. Sisler: Chemistry in Non- Aqueous Solvents, (7) E. G. Rochow: Organimetallic Chemistry, (8) H. H. Sisler: Electronic Structure, Properties and the Periodic Law, published by Chapman and Hall Ltd., London, 1965, 10sh 6d each.

Electroplating and Metal Finishing, Vol. 17, No. 12, 1964; Vol. 18, No. 3, 1965; Robert Draper Ltd., Teddington, Middx, England.

Australasian Corrosion Engineering, Vol. 9, No. 1, 2, 1965, North Sydney, N. S. W.

Journal of the Electrochemical Society of Japan, Vol. 32, No. 2, 1964, Tokyo.

Corrosion Bulletin, Vol. 2, No. 2, 1965, Jamshedpur.

Florida Engineering New, Vol. 7, No. 1, 1965, Engineering and Industrial Experimental Station, Gainesville.

Copper and Copper Alloy Plating, *by* R. Pinner, published by Copper Development Association London, 2nd ed., CDA publication No. 62, 1964, 232 pages, 11sh 6d.

The Aluminium Courier, No. 69, Aluminium Federation, London.

Annual Bulletin of Electric Energy Statistics for Europe, Vol. 9, 1963, United Nations, New York, 1964, through UN Information Centre, New Delhi.

Journal of the Indian Institute of Science, Vol 47, No. 2, 1965, Bangalore.

Engineering Progress at the University of Florida, Vol. 18, No. 9, 12, 1964, Florida Engineering and Industrial Experiment Station, Gainesville.

Information News Letter, Industrial Liaison and Extension Services, CSIR, Vol. 4, No. 1, 1965, New Delhi.

Products Finishing, 1965 Directory and Products Review, published *by* Gardner Publications Inc, Cincinnati, Ohio, U. S. A., 408 pages.

BOOK REVIEWS

The Nature and Chemistry of High Polymers, *by* R. F. O'Driscoll, published by Chapman and Hall Ltd., London, 1965, 111 pages, 10sh 6d.

This book is a concise survey of the nature and chemistry of High Polymers covering up a wide variety of topics in six chapters. Topics treated are: (i) Nature of high polymers; (ii) Organic polymerization reactions, (iii) Inorganic polymerization reactions, (iv) Physical behaviour of polymers, (v) Stereochemistry of polymers and (vi) The polymers of nature. It has been written by the author to introduce the subject to a person interested in learning about polymers and to give a general idea to the graduate

chemists. In chapters I, II, III and V the author has presented well in a condensed form about the nature of bonding in polymers, polymerization techniques, and the stereochemistry of polymers with examples. Chapter IV deals with the physical properties of polymer solutions and mechanical behaviour of solid polymers, while the last chapter deals with natural polymers, which is gaining more importance.

The author has successfully faced the task of covering the entire field of high polymers in about 100 pages. But it is doubtful how far the aim has been achieved, for the condensation has led to brief cataloguing of the processes and methods in high polymers rather than the presentation of the fundamentals and physical concepts to the beginners. On the whole, the book presents a bird's eye view of the subject to-date.

—(Miss) V.K.

Electrodeposition of Alloys, *by* V. A. Averkin (Ed.), published for the US Dept. of Commerce and the National Science Foundation, Washington D.C. by the Israel Programme for Scientific Translations, Jerusalem, translated from Russian, 1964, 201 pages.

This publication is a collection of 14 papers on recent work in the USSR in the field of alloy deposition. It covers the theoretical aspects and properties of deposits, as well as the plating of many alloys: tin with nickel, bismuth, antimony, lead, copper, zinc and cadmium; zinc with nickel and copper; gold-copper; nickel-cobalt; chromium alloys. The publishers have indeed rendered a real service by the translation of the original in Russian. Some of the authors are well known for their contributions in electrodeposition.

There is a fund of information on the fundamental and applied aspects of plating in this book. The treatment is excellent. There are some references at the end of each paper, but mostly to Russian work. The omission of references to some important contributions outside the USSR is perhaps a weak point of the volume. In the ultimate analysis the book is strongly recommended as a valuable reference source to electrochemists, metallurgists and others interested in alloy plating.

—T.L.R.

Indian Chemical Directory, 8th Ed., 1965, published by Technical Press Publications, Bombay, 148 pages, Rs. 15.

This Directory provides useful information on manufacturers and suppliers of chemicals and chemical products. It also includes Indian Standards, statistics for import and indigeneous production of chemicals, list of scientific societies, consultancy services and testing laboratories. The publication will be very helpful for buyers of chemicals.

—T.L.R.

Catalogue of Indian Chemical Plant — 1965, published by Technical Press Publications, Bombay, 80 pages plus contributed catalogues matter, Rs. 15.

This catalogue consists of 4 parts: (1) Survey of the chemical plant industry, (2) Buyer's guide to indigeneous chemical plant, (3) Buyer's guide to imported chemical plant and (4) Master index to manufacturers and suppliers of chemical plant and equipment. At the end there are contributed catalogues from leading manufacturers and suppliers of chemical plant and equipment. The material provided in the volume will no doubt be extremely useful in the manufacture of plant and equipment in the chemical industries.

—T.L.R.

Advanced Physico-chemical Experiments, *by* J. Rose, published by Sir Isaac Pitman and Sons Ltd., London, 1964, 414 pages, 50 sh.

There are eight chapters and eighty-two experiments in this book, whose scope is very wide. The chapters are as follows: analysis, complex formation, electro-chemistry, kinetics, photochemistry, spectroscopy, thermo-dynamics and other experiments. Each experiment is dealt in the sequence—theory, apparatus, procedure, results, conclusions and comments. The experiments are illustrative and self-suggesting, enabling one to plan the rest of the experiments on similar lines and to anticipate the type of results one would expect. Also included are such diverse experiments as the B.E.T. isotherm, application of infra-red spectroscopy to structural problems, photo-chemistry, ternary diagrams, the Janecke projection and the Hammett acidity function. It can be hoped that this book designed for chemistry, chemical engineering and metallurgy students will be of much use because of its versatility.

—D.V.S.

Symposium on Peak Load Coverage, Volume II, published by United Nations, New York, 1964, 97 pages, $1.50.

The discussions held in 4 groups at the Symposium on Peak Load Coverage held at Venice during 1963 have been recorded in this volume. The speakers are drawn from 16 countries. The report contains 20 figures at the end. The publication will be quite informative for specialists concerned with peak load coverage.

—T.L.R.

Products Finishing — 1965 Directory and Products Review, published by Gardner Publications Inc, Cincinnati, Ohio, USA, 408 pages.

'Products Finishing' is a well known Journal in metal finishing from the USA, and this Directory has been brought out by the publishers of the same. It is divided into 5 sections: (1) Product index, (2) Finishing equipment, materials, processes, services, schools, (3) Free literature, (4) Products review and (5) Names and addresses. The directory is an important source for information on chemicals and equipment made in the USA for finishers.

—T.L.R.

Copper and Copper Alloy Plating *by* R. Pinner, published by Copper Development Association, London, C.D.A. Publication No. 62, Second edition, 1964, 232 pages, 11sh 6d.

The Copper Development Association is doing yeomen service by bringing out books on the use of copper and its alloys for the benefit of those who use copper. This publication on copper and copper alloy plating is in its second edition in such a short time. The subject matter has been revised and brought up to date in the light of recent research and development work. The book describes generally the process of copper plating in all its aspects.

It consists of twenty chapters. In the first two chapters, application of copper plating and the preparation of the basis metal are described. Various types of baths for copper plating are dealt in detail in the next four chapters, and include fluoborate and pyrophosphate baths. Copper baths of less importance are included in the chapter 8. Copper alloy plating like brass,copper—tin and less commonly used alloys like copper-tin-zinc, copper-nickel, etc. are described in three chapters. Chemical deposition of copper and bronze and copper anodes form the subject matter of next two chapters. Details of procedure of treatment after copper plating are given in chapter 14, and procedures for plating on different basis metals and non-metals are given in the next chapter. The chapter on electroforming and electrotyping is well written. Properties and testing of copper deposits and chemical analysis and control of plating baths are covered in chapters 17 and 18 respectively. The last two chapters deal with the practical plater's problem of rejects, stripping of deposits and health hazards. A useful appendix is included giving miscellaneous information. References are given at the end of each chapter together with a number of tables and illustrations. In this edition an index has been included to make the publication more useful.

The book has successfully dealt with considerable subject matter in a small space, and will serve as a valuable guide not only to the practical electroplater, but also to engineers and metallurgists whose work is associated with "the increasing number of applications of copper and copper alloy plating".

—S.K.