BOOK SECTION

New Publications

A Guide to the Application of ASTM-AES Metal Finishing Standards so as to achieve Quality, published by Metal Finishing Suppliers' Association Inc, New York, 1964.

Physical Chemistry, by A. J. Mee, published by Aldine Publishing Co, Chicago, 1964, 719 pages, $ 5.95.

A Course in Process Design, by T. K. Sherwood, published by General Publishing Co, Toronto, 254 pages, $ 8.25.

Complexation in Analytical Chemistry, by A. Ringbom, published by John Wiley & Sons, Inc., New York, 1964, 395 pages, $ 15.

Proceedings of the United Nations Conference on New Sources of Energy—Vol. 2, published by the UN, 1964, 420 pages, $ 5.

An Introduction to the Chemistry of Complex Compounds, by A. A. Grinberg, translated from the 2nd ed — 1951 by J. R. Leach, edited by D. H. Busch and R. F. Trimble, published by Pergamon Press, Oxford-London-Paris, 1962, 363 pages, £ 5 sh 5.

Quantum Mechanics, by D. I. Blokhintsev, translated from Russian by J. B. Sykes, published by D. Reidel Publishing Co, Dordrecht-Stuttgart, 1964, 600 pages, approx, 106 sh.

Organic Polarographic Analysis, by P. Zuman, published by Pergamon Press, Ltd., Oxford, 1964, 313 pages, 50 sh.

Advanced Physico-Chemical Experiments, by J. Rose, published by Sir Isaac Pitman & Sons, London, 1964, 50 sh.

Surface Treatment and Finishing of Aluminium and Its Alloys, by S. Wernick and R. Pinner, published by Robert Draper Ltd, Teddington, Middx, England, 3rd ed, 1964, 792 pages, £ 8 sh 8.

Automatic Methods in Volumetric Analysis, by D. C. M. Squirrell, published by Hilger and Watts Ltd, London, 1964, 201 pages, 42 sh.

Limitations of Detection in Spectrochemical Analysis, published by Hilger and Watts Ltd, London, 1964, 12 sh 6 d.

Physical Chemistry, by D. G. Eggers, N. W. Gregory, G. D. Halsey and B S. Rabinovitch, published by John Wiley and Sons, Inc., New York, 1964, 783 pages, $ 9.95.

Modern Methods of Analysis of Copper and Its Alloys' by C. M. Dozinel, Translation from French by S. L. Man, published by Elsevier Publishing Co, New-York, 1963, 287 pages, $ 14.50.

Guide to Activation Analysis, by W, S. Lyon Jr. (Ed.), prepared under the auspices of the United States Atomic Energy Commission 1964, 205 pages, $ 5.95.

Chemical Transport Reactions, by H. Schafer, Translated by H. Frankfort, published by Academic Press, New York — London, 1964, 158 pages, 54 sh.

Metals Handbook — 8th Ed, Vol. 2: Heat Treating, Cleaning and Finishing, by T. Lyman (Ed.), published by Chapman and Hall Ltd., London, 1964, 724 pages, 160 sh.

Inorganic Reaction Mechanisms, by J. D. Edwards, published by W. A. Benjamin Inc., New York, 1964, 190 pages, $ 7.

Corrosion and Protection of Metals, published by the Institution of Metallurgists, London, 1965, 27 sh 6 d.

Aluminium. Its applications in the Chemical and Food Industries, by P. Juniere and M. Sigwalt, translated by W. C. E. Barnes, published by Crosby Lockwood & Sons, Ltd., London, 1964, 267 pages, 55 sh.

The Hoganas Iron Powder Handbook, published by Hoganas-Billesholms AB, Hoganas, Sweden, 627 pages.

Modern Aspects of Electrochemistry–3 by J.O'M. Bockris and B. E. Conway (Ed), published by Butterworths, London, 1964, 474 pages, 95 sh.

Publication Received

Battelle Technical Review, Vol. 13, No. 7, 10, 1964, Battelle Memorial Institute, Columbus, Ohio.

CSIR News, Vol. 14, No. 15-22, 1964, New Delhi.

UN Weekly Newsletter, Vol. 12, No. 36-48, 1964, UN Information Centre, New Delhi.

Bulletinul Institutulin Polytechnic Din Iasi, Sene Noua, Tomul 9 (13), Fasc 1-2, 1263.

Australian Chemical Engineering, Vol. 5, No. 7-5, 1964, North Sydney, N.S.W.

Commercial Methods of Analysis, by F. D. Snell and F. M. Biffen, published by Chemical Publishing Co., Inc., New York, 1964, 753 pages, $ 12.

Review of Metal Literature, Vol. 21, No. 7-9, 1964, American Society for Metals, Metals Park, Ohio.

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

Industrial Finishing Vol. 16, No. 193-195, 1964 Arrow Press Ltd, London.

Corrosion Technology, Vol. 11, No. 7-10, 1964, Grampian Press Ltd., London.

ISI Bulletin, Vol. 16, 8-11, 1964, New Delhi.

Metal Finishing Journal, Vol. 10, No. 115-118, 1964, Fuel and Metallurgical Journals Ltd., London.

Corrosion Prevention and Control, Vol. 11, No. 7-10, 1964, Scientific Surveys Ltd., London.

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Metal Finishing, Vol. 62, No. 8, 9, 1964, Metals and Plastics Publications, Inc., Westwood, N. J., U.S.A.

Florida Engineering News, Vol. 6, No. 3, 1964, Engineering and Industrial Experiment Station, Gainesville.

Anti-Corrosion Mannual, Fifth Edition, published by Corrosion Prevention and Control (Scientific Surveys Ltd.), London, 1964, 350 pages £3 sh3.

Science and Engineering, Vol. 17, No. 7, 8, 1964, ISE, Calcutta.

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Chemical Age of India, Vol. 15, No. 9-11, 1964 Technical Press Publications, Bombay.

The Nickel Bulletin, Vol. 37, No. 6-8, 1964, The International Nickel Co. (Mond) Ltd., London.

Materials Protection, Vol. 3, No. 8, 9, 1964, NACE, Houston, U.S.A.

Corrosion, Vol. 20, No. 8, 9, 1964, NACE, Houston, U.S.A.

Thermodynamics for Chemists, by S. Glasstone, published by Affiliated East-West Press P. Ltd., New Delhi, Eleventh Printing, East-West Ed, 1964, 522 pages, Rs. 10.

Electroplating and Metal Finishing, Vol. 17, No. 9, 10, 1964, Robert Draper Ltd., Teddington, Middx, England.

Handbook of Industrial Electroplating, by E. A. Ollard and E. B. Smith, published for "Metal Industry" by Iliffe Books Ltd., London, 3rd ed, 1964, 400 pages, 65sh.

Inco-Mond Magazine, No. 25, 1964, The International Nickel Co. (Mond) Ltd., London.

Cobalt, No. 24, 1964, Cobalt Information Centre, Brussels.

Electro-Technology, Vol. 8, No. 2, 1964, Society of Electronic Engineers, Bangalore.

Lead Abstracts, Vol. 4, No. 7, 8, 1964, LDA, London. through Indian Lead Zinc Information Centre. Calcutta.

Zinc Abstracts, Vol. 22, No. 7, 8, 1964, ZDA London through Indian Lead Zinc Information Centre, Calcutta.

Problems in the Design and Operation of Thermal Power Stations, Vol. 1, published by United Nations, New York, 1964, 155 pages.

OSU Research Review, Vol. 1, No. 1, 1964, Office of Research and the Research Foundation, The Ohio State University, Columbus, Ohio.

Determination of pH - Theory and Practice, by R. G. Bates, published by John Wiley & Sons Inc, New York-London-Sydney, 1964, 435 pages, $13.

The Situation and Future Prospects of Europe's Power Supply Industry in 1962/1963, published by United Nations, New York, 1964, 89 pages.

Rural Electrification, Vol. VII, published by United Nations, New York, 1964, 45 pages.

Australasian Corrosion Engineering, Vol. 8, No. 9, 1964, North Syndey, N.S.W.

Australian Journal of Applied Science, Vol. 15, No. 2, 1964, CSIRO, East Melbourne.

Journal of the Indian Institute of Science, Vol. 46, No. 4, 1964, Bangalore.

Journal of the Electrochemical Society of Japan, Vol. 32, No. 1, 1964, Tokyo.

Limitations of Detection in Spectrochemical Analysis, published by Hilger and Watts Ltd., London, 1964, 135 pages, 12sh 6d.

Automatic Methods in Volumetric Analysis, by D.C.M. Squirrell, Published by Hilger and Watts Ltd., London, 1964, 201 pages, 42sh.

BOOK REVIEWS

Handbook of Industrial Electroplating, *by* E. A. OLLARD and C. B. SMITH, published for Metal Industry by Illife Books Ltd., London, Third Edition, 1964, 396 pages, 65sh.

This is the third edition of the popular hand book revised in 1958. In presenting this revised edition the authors have endeavoured " to incorporate the advances that have been made in the subject over the intervening years ". The authors have made it clear that this is not meant to be a text book. All theories have been omitted, and the book describes merely the practical part of installing and maintaining electrodeposition plant.

The handbook consists of thirteen chapters. The chapter on D.C. supplies has been re-written to include the latest like germanium, silicon rectifiers. Details of P.R. plating are included. Details of deposition plant have been brought up-to-date to include newer conception in tank lining, ultrasonic cleaning, pumps and filters, heaters, exhaust systems, pickling plants, etc., and plating equipments like barrels, automatic plants. Details of the new jig fabrication metal-titanium have been included. The chapter on water and drainage includes details of the quality of the water for electroplating and disposal of the effluent from an electroplating shop. There are two chapters on solution formulae and special formulae. Details of sulphamate and pyrophoshate baths, plating on non-metals, and anodising have been included. Under gold plating composition, the authors have omitted to mention acid and neutral gold baths which are in vogue for the past ten years. Analytical methods for the maintenance of plating solution and testing deposits are dealt with in detail. Purification of solutions and safety precautions are discussed. The chapter on plated threaded parts is a welcome addition as it throws considerable light on the quality of deposit expected on threaded components. The last chapter covers plating shop costing and work study. Finally there is a comprehensive glossary of abbreviations, trade names and miscellaneous tables and standard specifications. An index is also added.

Like the earlier edition this nicely got up practical book, by the authors who have vast experience in this field, will be of immense use to electroplaters and engineers.

— S. K.

Determination of pH — Theory and Practice, *by* R. G. BATES, published by John Wiley and Sons, Inc.. New York — London — Sydney, 1964, 435 pages, $13.

This publication is a revised and enlarged version of ' Electrometric pH Determinations ' by Bates and published ten years back. The chief object has been to incorporate the essential modifications in keeping with the recent developments. The author is well known for his work in this field.

The book consists of twelve chapters covering the fundamentals, pH standards and buffers, electrodes and techniques, EMF measurement, and industrial pH control. Glass electrodes have been discussed very well in a separate chapter. pH control is of great importance in many industrial processes, and there is a concise treatment of this topic including automation in the last chapter. The theoretical considerations have been dealt with in an excellent manner throughout the book. Each chapter contains references to literature and figures for illustration. There is a useful appendix together with author and subject index in the end. This volume can be regarded as an important treatise on the principles and applications of pH, and is strongly recommended for the research scholar, electrochemist and technologist.

— T.L.R.

Thermodynamics for Chemists, *by* SAMUEL GLASSTONE, published by D. Van Nostrand Company Inc., Princeton, New Jersey and Affiliated East-West Press Ltd., New Delhi, 1964, 522 pages, Rs, 10.

This is the eleventh printing of the edition first published in 1947 to bring down the cost of the book for the benefit of students and others.

The various topics in the book are dealt with in a methodical and sequential order, the sequence being right from fundamentals of thermodynamics to the advanced matter like third law of thermodynamics via the applications of these laws to various systems as such. Finally a touch up is given to the electrochemical part like thermodynamic properties of ions, Debye-Hückel theory and its applications to strong and weak electrolytes. Apart from the theory, about one hundred numerical examples and four hundred exercises of a variety of types have been set up to give a clear grasp of what one has read.

There is no shadow of doubt in considering this volume as a key to be possessed by any chemist or chemical engineer.

—D. V. S.

Problems in the Design and Operation of Thermal Power Stations, Volume 1, published by Economic Commission for Europe, United Nations, New York, 1964, pages 155 plus 8, $2.

This publication contains 2 reports of a group of experts set up by the UN Committee on Electric Power to study certain problems in the design and operation of thermal power stations. The first report on "Trends in the General Design of Thermal Power Stations' has been presented under: (1) basic economic trends in the development of thermal power stations, (2) economics of design and (3) economics of construction. The second part entitled "Corrosion of Terminal Heat Exchange Surfaces in Power Stations using Liquid Fuel containing Sulphur' has been discussed from the viewpoint of (1) study of the phenomenon, (2) measurements (3) corrosion control. The matter is supplemented with tables, figures and annexures. The information contained in this volume will be useful to those interested in the recent trends in the design and operation of thermal power stations in several countries.

—T. L. R.

Anti-Corrosion Manual, Fifth Edition, published by Corrosion Prevention and Control, London, 1964, 350 pages, £3 sh 3.

This is the fifth edition of the well known Manual first published in 1958. In each edition there is a change of topics treated and also revision of earlier topics. The Journal "Corrosion Prevention and Contral" has established itself in the field of Corrosion.

The present volume deals with corrosion in civil engineering, cathodic protection, corrosion resistant materials, protective coatings, corrosion inhibitors, testing methods and miscellaneous items. There is a directory section covering brand names, buyers' guide and, names and addresses.

The treatment of the various subjects is fairly exhaustive and incorporates the new developments. Corrosion resistant materials have been given adequate coverage in keeping with the recent progress in materials technology. The publication contains a fund of information of value as a reference source to metallurgists, corrosion engineers, electrochemists and industries.

—T. L. R.