BOOK SECTION

New Publications

Chelating Agents and Metal Chelates, by F. P. Dwyer and D. P. Mellor, published by Academic Press, New York and London, 1964, 530 pages, 121 sh 6d.

Determination of pH — Theory and Practice, by R. G. Bates, published by John Wiley & Sons, New York, 435 pages, $13.

Precious Metal Plating, by J. Fischer and D. E. Weimer, published by Robert Draper Ltd., Teddington, Middx., England, 1964, 271 pages, 70 sh.

Recent Progress in Surface Science, by J. F. Danielli, K. G. A. Pankhurst and A. C. Riddiford (Ed.), published by Academic Press, New York and London, 1964, Vo.. I, 397 pages, 117 sh 6d; Vol. II, about 500 pages.

Ionic Equilibrium, by J. N. Butler, published by Addison-Wesley Publishing Co., Inc., Reading, Mass, U.S.A., 1964, 547 pages.

Solubility and pH calculations, by J. N. Butler, published by Addison-Wesley Publishing Co., Inc., Reading, Mass, U.S.A., 1964, 104 pages, $1.75.

Advances in Physical Organic Chemistry, Vol. II,by V. Gold (Ed.), published by Academic Press, New York and London, 1964, 288 pages, 63 sh.

Techniques of Inorganic Chemistry, by H. B. Jonassen and A. Weissberger (Ed.), published by John Wiley and Sons, New York and London; 1964 — Vol. I, 268 pages, 72 sh; Vol. II, by N. F. Johnson, E. Eichler and G. D. O'Kelly, 202 pages, 60 sh.; Vol. III, 345 pages, 87 sh.

Industrial Paint Application, by W. H. Tatton and E. W. Drew, published by George Newnes Ltd., London, 1964, 208 pages, 36 sh.,

Publications Received

Insdoc List — Current Scientific Literature, Vol. 11, No. 9-13, 1964, New Delhi.

Corrosion Technology, Vol. 11, No. 4-6, 1964, Grampian Press Ltd., London.

Journal of the Indian Institute of Science, Vol. 46, No. 1-3, 1964, Bangalore.

Industrial Finishing, Vol. 16, No. 190-192, 1964, Arrow Press Ltd., London.

British Patents, Division H1, London.

Corrosion Bulletin, Vol. 1, No. 3, 4, 1964, Corrosion Advisory Bureau, CSIR, Jamshedpur.

ISI Bulletin, Vol. 16, No. 4-6, 1964, New Delhi.

Metal Finishing Journal, Vol. 10, No. 112, 114, 1964, Fuel and Metallurgical Journals Ltd., London.

Electroplating and Metal Finishing, Vol. 17, No. 4, 5, 1964, Robert Draper Ltd., Teddington, Middx., England.

Science and Appliance, Vol. 28, No. 3-5, 1964, The Ohio State University Research Foundation, Columbus, Ohio.

Corrosion Prevention and Control, Vol. 11, No. 4, 5, 1964, Scientific Surveys Ltd., London.

Journal of the Electrochemical Society of Japan, Vol. 31, No. 3, 1963, Tokyo.

Chemical Age of India, Vol. 15, No. 5, 1964, Technical Press Publications, Bombay.

Review of Metal Literature, Vol. 21, No. 4, 1964, ASM, Metals Park, Ohio.

Zinc Abstracts, Vol. 22, No. 3, 1964, ZDA, London.

Inco-Mond Nickel, No. 7, 1964, International Nickel Co. (Mond), Ltd., London.

The Nickel Bulletin, Vol. 37, No. 1-2, 3, 4, 1964, International Nickel Co. (Mond), Ltd., London.

CSIR News, Vol. 14, No. 8-12, 1964, New Delhi.

Corrosion, Vol. 20, No. 4, 1964, NACE, Houston.

Materials Protection, Vol. 3, No. 4, 1964, NACE, Houston.

Battelle Technical Review, Vol. 13, No. 4, 5, 1964, Battelle Memorial Institute, Columbus, Ohio.

Metal Finishing, Vol. 62, No. 4, 5, 1964, Metals and Plastics Publications Inc., Westwood, N. J., U.S.A.

Australian Chemical Engineering, Vol. 5, No. 4, 5, 1964, North Sydney, N.S.W.

Australasian Corrosion Engineering, Vol. 8,

No. 4, 5, 1964, North Sydney, N.S.W.

Florida Engineering News, Vol. 6, No. 2, 1964, Engineering and Industrial Experiment Station, Gainsville.

Farm Rationalization — Economic and Human Aspects of specialization, published by United Nations, New York, 1964, 119 pages.

Science and Engineering, Vol. 17, No. 4, 5, 1964, ISE, Calcutta.

United Nations Weekly Newsletter, Vol. 12, No. 25-27, 1964, UN Information Centre, New Delhi.

Inco-Mond Magazine, No. 24, 1964, International Nickel Co. (Mond) Ltd., London.

Wiggin Nickel Alloys, No. 76, 1964, Henry Wiggin and Co., Birmingham.

Recent References on (1) Alloy Plating, (2) Electroless Plating and (3) Plating with Precious Metals, published by Hertfordshire County Council Technical Information Service, Hatfield, Herts, England, 1964; (1) 52 pages, 4 sh., (2) 20 pages, 2 sh., (3) 36 pages, 3 sh.

Engineering Progress at the University of Florida, Vol. 18, No. 1, 4, 5, 1964, Florida Engineering and Industrial Experiment Station, Gainseville.

Crerar Metals Abstracts, Vol. 12, No. 1-2, 1963, The John Crerar Library, Chicago.

BOOK REVIEWS

Modern Practice in the Pickling of Metals and related Processes, *by* Max Straschill, translated from German, published by Robert Draper Ltd., Teddington, England, 1963, 196 pages, 65 sh.

This book is seventh in the Robert Draper Translation series being the translation of the German publication, Neuzeitliches Beizen Von Metallen by Max Straschill, Published by Eugen G. Leuze Verlag, 1962. The publishers of this translation have stated that a few additions to the text, illustrations and literature reference have been made to make it more useful. The book discusses general principles and modern practices in pickling and related processes in preparing the metal surfaces for electroplating, phosphatising, painting, polishing, vitreous enamelling, metal spraying, welding, etc. The author has rightly said in the preface to the German Edition, "in metal finishing, the right surface preparation is half the battle". The volume deals with the general principles of pickling with particular reference to the methods.

The publication is divided into nineteen chapters. General notes on pickling and reactions form the subject matter of first two chapters. Description of pickling plants with special reference to fume exhaust and the chemicals for plating, neutralisation, passivation, and after-treatments is given in the following two chapters. Pickling inhibitors are discussed. Make up of pickling solutions and different pickling processes are dealt with next. After treatments like temporary prevention of corrosion, storage, are brought out well in another chapter. Pickling of individual metals like iron and steel, copper and copper alloys, aluminium, magnesium, zinc, silver, titanium, nickel, molybdenum, tungsten, lead, tin, gold and others are described in individual chapters. The author has dealt with the hazards and safety measures in pickling processes. The processes related to pickling like mechanical descaling, abrasive blasting, etching, are described in an exclusive chapter. The chapter on the control of pickling solutions is followed by one each on effluent treatment and disposal and treatment of pickling fumes. Treatment of pickling fumes is relatively a new concept and the author has done well in focussing much attention to this aspect of neutralisation of acid fumes. An appendix on the densities of vairous acids has been included apart from author and subject index. References are given as foot note on each page.

The book is well written and the translation has been nicely produced. There is no good practical guide book on this subject of pickling and the present one fills the void. The publishers deserve to be commended for having taken up such useful translation work. This book will be an asset to the practical metal finishers, metallurgists, engineers and those interested in metal finishing. As in the case with Robert Draper's translation series, the price is rather high.

—S.K.

Recent References on (1) Alloy Plating, (2) Electroless Plating and (3) Plating with Precious Metals, published by Hertfordshire County Council Technical Information Service, Hatfield, Herts, England, 1964; (1) 52 pages, 4 sh, (2) 20 pages, 2 sh., (3) 36 pages, 3 sh.

These three booklets present a list of recent papers and patents on alloy, electroless and precious metal plating. Abstracts are included in some cases. Each one contains a metal-wise classification and an author index. Although the bibliographies are not intended to

be comprehensive, they do cover information of use to research workers and platers.

—T.L.R.

Products Finishing 1964 Directory, published by 'Products Finishing', Cincinnati, Ohio, 408 pages.

This Directory is published every year by the well known Journal in the finishing field 'Products Finishing'. It is divided into 4 sections: finishing equipment, materials, processes, services, schools; free literature; products review; names and addresses. It also contains instructions for using the directory, and reader service cards to obtain detailed information on manufacturers' products. The number of advertisers is quite large. The publication will no doubt serve as a valuable reference on industrial finishing in the U.S.A.

—T.L.R.

Hard Chromium Plating *by* J. David Greenwood, published by Robert Draper Ltd., Teddington, Middlesex, England, 1964, 201 pages, 65 sh.

This is a hand book of modern practice in the field of hard chromium plating written with the object of providing a really practical treatise on the art and science of the process. Lack of detailed methods and practical skills employed in this field of electrodeposition due to the secrecy maintained by the individuals and firms has prompted the author to give out the details of technique of hard chromium plating. He has succeeded well in giving under one cover as much data as possible on the layout of plant, methods of setting up work, techniques for depositing, polishing and grinding the deposits,. industrial application, etc. The book is divided into ten chapters. Properties and industrial applications of hard chromium are described in chapter two. Apart from deposits from standard solution the author has mentioned self-regulating high speed (S.R.H.S.) solution and the crack-free S.R.H.S. solution. The important aspect of jigging and masking and avoiding excess build-up in hard chromium plating have been treated in a lucid manner. Processes, plant and solution, and electrical equipment are dealt with in detail. The author has discussed techniques for heavy and light deposition and controlled light deposits. The last chapter comprises of tables and useful data. An index has been included.

The get-up is excellent and reading easy. The price is rather high. Hard chromium plating has become an indispensible tool for engineering and allied industries, and this really practical book by a specialist in the field deals with almost all aspects of the subject. The publication should be of great value to technicians, engineers and chemists interested in hard chromium plating.

—S.K.

Modern Electroplating, *by* F. A. Lowenheim (Ed), published by John Wiley and Sons, Inc. New York, London, Sydney; 2nd ed., 1963, 768 pages, $ 16.

This second edition of the tremendously popular "Modern Electroplating" has been revised appreciably to keep up with the current trends and needs in the field. Several useful new chapters like anodizing, electroless plating, electrophoretic coatings, have been added. The various aspects of the subject have been dealt with partwise so as to lay adequate emphasis on each. Parts I and II on 'General Principles' and 'The Plating Metals' respectively contain new chapters on metallurgical principles and aluminium plating. 'Alloy Plating', dealt with in Part III, has perhaps not been given as much coverage as the literature would demand, but this may be justified from the viewpoint of the limited success it enjoys in industrial finishing. Part IV covers all the 'Special Topics' and contains most of the new chapters. Chapters on cleaning before plating, and chromate conversion coatings are included here. No doubt the book will prove quite useful to those concerned with electroplating processes — the electrochemist and metallurgist, laboratory technician and metal finisher.

—S.S.M.