NEW BOOKS

edited by F. W. Quackenbush

PAINT TECHNOLOGY MANUALS, Part 1, Non-convertible Coatings, Second Edition, Edited by C. J. A. Taylor and S. Marks, (Chapman and Hall, London, 373p, 1969, 36 shillings in U.K., distributed in the U.S. by Barnes & Noble, Inc.).

This is Part 1 of a six part manual on paint technology prepared by specialists and published on behalf of the Oil and Colour Chemist's Association. The primary purpose of the manual is to assist teachers and students in preparing the students for examinations in paint technology, and in the technical education of apprentices and trainees in the paint industry. The manual is well written and should also be of great interest to anyone desiring a brief but thorough review of non-convertible coatings.

The first edition was published in 1961. The current edition follows essentially the same format as the first, expanding as needed to include new advances and techniques in surface coating technology.

The manual has 12 chapters covering the following subjects: Nitrocelluose, solvents for nitrocelluose lacquers, pasticizers, pigments for lacquers, formulation of wood finishes, principal types of lacquers, celluose acetate, ethyl acetate, chemical derivatives of rubber, synthetic thermoplastic lacquer resins, spirit varnishes and recent developments. The chapters are well written, and at the end of each chapter is a series of experiments designed to assist the student.

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PAINT TECHNOLOGY MANUALS, Part 2, Solvents, Oils, Resins and Driers, Second Edition, Edited by C. J. A. Taylor and S. Marks, (Chapman and Hall, London, 268 p, 1969, 36 shillings in U.K., distributed in the U.S. by Barnes & Noble, Inc.).

This is Part 2 of a six part manual on paint technology published on behalf of the Oil and Colour Chemists Association. As Part 1, this manual is designed as an educational tool for use by students in preparation for examinations and for the training of apprentices and technicians in paint technology.

This volume of the manual covers those naturally occurring substances, other than pigments, that are used for making paint and varnish. In instances where these substances have been partly or completely replaced because of advances in technology, the newer materials are also described. Anyone desiring a quick overview of the technology of the coatings industry will be interested in this manual.

The manual has nine chapters including the following subjects: bitumens and pitches, driers, hard oil-soluble synthetic resins, natural resins, oils, solvents, recent developments, and modern analytical methods. At the end of each chapter are several experiments for the student.

The sources, chemistry, formulations, properties, uses and analytical techniques are described for each substance. The primary revision of the second edition over the first edition, published in 1961, has been the addition of two chapters. Chapter 8 describing recent developments in soluble driers, modification of oils and new solvents. Chapter 9 covers very briefly new developments in analytical methods including chromotography, spectrography and infrared.

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THE CHEMISTRY AND PHYSICS OF HIGH ENERGY REACTIONS, by Ernest J. Henley and Everett R. Johnson (Washington, D.C., University Press, Washington, D.C., 475 p, 1969, $18.50).

This is a hard-backed book consisting of 13 chapters. Each chapter is well referenced, but not to the extent that the references form a literature survey of the topic. There is both an author and a subject index.

The book is designed to be a coherent text book which treats the entire field of radiation chemistry. The book analyzes the complex high energy reactions induced by radiation in terms of physical-chemical principles developed in the text. It stresses the basic physical chemistry underlying current theories and experimental techniques. Topics such as theory of ion molecule reactions, mass spectrometry, pulsed radiolysis, energy transfer in liquids, solids and gasses, competition kinetics, flash photolysis and the use of scavengers are treated in detail and furthermore supported by solved illustrative problems. Numerous examples and end-of-chapter problems make it an ideal text for formal course work and personal reference.

The volume will certainly be of intereest to anyone who wishes to gain a basic knowledge of radiation chemistry. The authors presume, however, that the reader will have a fundamental knowledge of physical chemistry, thermodynamics and integral calculus.

The chapter entitled "Effect of Radiation on Liquid Hydrocarbons" will be of particular interest to AOCS members working in the field of detergents. There is also an easy-to-read chapter concerned with radiation-induced polymerization which could be of general interest to all scientists.

This well written book fills a void in the field of radiation chemistry.

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• *Industry Items*

CARGILL, INC., Minneapolis, Minn. will build a major soybean processing plant in Fayetteville, N.C. Construction is to begin immediately. The new plant will have initial capacity to process 1,000 tons (33,000 bushels) of soybeans per day. Storage units for soybeans will be ready for the 1970 harvest and the processing unit will be completed in the spring of 1971. The company said the plant is designed to be expanded to 2,000 tons later. Cargill said that one factor deciding its location in Fayetteville is the rapidly expanding production of soybeans in the coastal area of North Carolina. Another is the steadily increasing demand for the protein meal from soybeans by the poultry and livestock industry of the region.

As a further step in a long range expansion plan, a new manufacturing unit for oleochemicals (fatty acids and derivatives) has been built by STEINFELS INC., Zurich, Switzerland. As a result of increasing exports the plant is working at full capacity. The following are being produced: distilled fatty acids; distilled glycerol; stearic and oleic acid, mainly cosmetic grades; antifoaming agents for detergents, superfatting agents for toilet soaps; and nitrogen derivatives of fatty acids. Other new products are envisaged for the future.

An agreement to sell the assets of the Catalyst, Food and Food Chemical Specialties Group of The Slick Corportion to the Pawnee Corporation, a Midwest producer and processor of food and agricultural products, was jointly announced by R. W. Van Tuyle, president of Slick, and R. L. Voorhees, chairman of Pawnee. The sale of this phase of Slick's operations is in pursuance of the company's policy in recent years of restructuring the company into a diversified manufacturer of air pollution control and product recovery equipment and specialty and water-treatment chemicals. Pawnee manufactures and distributes a broad line of basic farm products such as animal health products, feed supplements, seeds, chemicals and farm lubricants as well as food products, primarily in the Midwestern states.