

To shed some additional light on this latter problem, a Color Subcommittee, under the Chairmanship of Lloyd T. Goldsmith, has prepared a tabulation of the characteristics of sound tracks produced on commercial 35- and 16-mm color print processes. The table appears on p. 377 of this JOURNAL.

Not only manufacturers and users of sound reproducing equipment, but also film laboratory technicians will find this table of real value. Reprint copies on heavy paper have been prepared and will be supplied free of charge by the Society to all who wish them. Requests for copies or comments on the tabulation should be addressed to Bill Deacy at Society Headquarters.

An early issue of the JOURNAL will carry a more extensive contribution to the available literature on color motion pictures. This will be in the form of a report on the "Principles of Color Sensitometry," prepared by the Color Sensitometry Subcommittee under the Chairmanship of Carl F. J. Overhage. This report, which has been in work for nearly a year, is now completed and in manuscript form it amounts to nearly 150 pp.

Film Dimensions

Methods of producing 16-mm release prints in large quantity through the use of 32-mm perforated films have been adopted widely in the United States during the last decade. Experience gained over this period has resulted in the gradual development of uniform practices in preparation of negative picture and sound material, in printing the release positives and in slitting after processing to produce the 16-mm prints for projection. Work was begun in 1948 on standards for the special films thus used. Formal proposals for the standardization of two 32-mm films and one 35-mm film, 32-mm perforated, were published for a period of trial and criticism in the February, 1949, JOURNAL. Shortly after publication, a question arose concerning commercial slitting tolerances of 32-mm raw stock but on further investigation raw stock was found to be within the limits published in the proposed standards. As a result objections to the original proposals were withdrawn and two of them, previously approved by the Standards Committee, have now been forwarded to the ASA Sectional Committee on Motion Pictures, Z22. The third, covering the Dimensions of 35-mm film with 32-mm perforations, had not previously been sent to the Standards Committee, so is now out for their consideration. When the action of the Standards Committee is completed, this proposal will also be submitted to the Sectional Committee.

Book Review

Introduction to Theoretical and Experimental Optics, by Joseph Valasek

Published (1949) by John Wiley and Sons, 440 Fourth Ave., New York 16. 429 pp. + 6 pp. appendix + 4 pp. "Answers to Problems" + 4 pp. bibliography + 10 pp. index. 44 illus. $5\frac{3}{8} \times 8\frac{3}{8}$ in. Price \$6.50.

Publication of a new textbook of optics is a rather rare event these days when general attention is diverted to the more spectacular topics which abound in nuclear physics and electronics. A good general reason exists, therefore, to welcome this book. This is, however, not the only reason, as the book has its own

merits and it constitutes a valuable contribution to the fundamental optical literature.

The purpose of this book is to give the college student a working knowledge of the extended field of optics. Accordingly, the text covers in its four parts geometrical optics, physical optics, radiation and spectra, and a series of laboratory experiments under the heading of experimental optics. The first three parts are divided into 21 chapters accompanied by problems.

The presentation of the subject matter is well balanced and necessarily condensed, for it would not be possible to cover all the branches of optics and some closely related subjects in one handy volume. As was noted by the author and the publishers, some subjects (X rays, photographic optics, and ophthalmic lenses) are treated in greater detail than is customary in general textbooks of optics. This deviation from the usual is not objectionable to the reviewer. Although the reviewer cannot offer definitive rules as to what should be included and what may be excluded from a college textbook, he feels that no textbook should ignore the phenomena and objects with which we are in practically everyday contact. Indeed, it is rather discouraging to meet students who are conversant with the Kerr, Zeeman, Raman and other "effects," but have very little to say about their own spectacles or their photographic lenses. Let us hope that Prof. Valasek's students will be well acquainted with both laboratory and everyday aspects of optics.

Following this thought, the reviewer would have been pleased had the author at least briefly touched also the following subjects: medical and industrial radiology, biological effects of radiation, condensing and projection systems, anti-reflection films, interference filters, and phase-contrast microscopy. It is particularly difficult to justify the omission of the last three subjects which are now in the limelight of optical engineering.

The reviewer is disturbed by the fact that no recognition is given in the book to the current standardization efforts in the field of optics. Thus, while the term "equivalent focal length" has been widely used and recently sanctioned as standard by the American Standards Association (Z38.4.21—1948), it is not even mentioned in the book. It is beside the point whether or not the term is satisfactory (the reviewer is of the opinion that the "equivalent" is superfluous and misleading), as perhaps no terminology can satisfy everybody. The fact is that a strong demand exists for standardization of terms, definitions, and procedures in optics, and that a serious effort is being made, under the sponsorship of the Optical Society of America and of other organizations, to satisfy the demand. This effort will be in vain if our educational institutions do not teach the younger generation to appreciate standardization and to adhere to it. It will also be disheartening to the younger generation to discover, for example, that, while knowing the H-D speed, the Schneider number, the DIN system, and the Weston rating, they know nothing about the American Standard Speed and the American Exposure Index (Z38.2.1—1947), which are not mentioned in this book.

The book is not intended as an engineering manual. Still it may be very useful as a source of basic information to any engineering or research group concerned with optical problems. The well-selected bibliography at the end of the book adds considerably to its reference value.

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