

Greer, Beckman and Whitley Inc., San Carlos, Calif.; "Presentation of an Underwater Explosion Film" by S. J. Jacobs, Naval Ordnance Laboratory, White Oak, Silver Spring, Md.; "High-Speed Photographic Recording of Strong Shocks in Opaque Solids" by M. Sultanoff, Aberdeen Proving Ground, Md.; and "Photography of Burning Strands of a Solid Propellant" by R. B. Bowersox, Jet Propulsion Laboratory, Pasadena, Calif.

An item of interest relevant to the Congress concerns the formation in England of a Committee on High-Speed Techniques Using Optics. Secretary of the Committee is Kenneth R. Coleman, Building D 3, Atomic Weapons Research Establishment, Aldermaston, Berks. Meetings are held quarterly. Four members of the Committee plan to attend the 4th Congress.

## Education, Industry News

A total of 11,742 students was graduated from 202 technical institutes in the United States in 1956 in engineering-related curricula. Total enrollment in engineering subjects was 32,498 full-time students and 25,124 part-time. These figures are contained in a report on a survey of technical institutes conducted by the American Society for Engineering Education and the U.S. Office of Education. The term "technical institutes" is defined in the report as "institutions of higher education with programs of less than four years' duration." This report is the first of an annual series planned "to show developments and trends with important manpower implications."

Eight scientific motion pictures produced by the Argonne National Laboratory, Lemont, Ill., are among the 45 films accepted by the U.S. Atomic Energy Commission and the Office for International Conference for presentation at the Second International Conference on the Peaceful Uses of Atomic Energy, Geneva, Switzerland, Sept. 1-13. Titles of the films are: Fast Reactor Program; Experimental Boiling Water Reactor; Experimental Breeder Reactor I Core Disassembly After Melt-down; Experimental Breeder Reactor II Fuel Cycle Development; Experimental Breeder Reactor I Mark III Core; Zero Power Reactor III; Argonaut; and Ionizing Radiation in Man. The films, which were written and produced by George W. Lindholm, Jr., will be prepared in English, French, Spanish and Russian. After the conference they will be available in these languages commercially or through a loan arrangement.

Two experimental films, *New York, New York*, by Francis Thompson, and *A Day in Town*, which was made in Sweden by B. Hulten, have been chosen to receive the Award of Exceptional Merit bestowed by the Creative Film Foundation, 35 Morton St., New York 14, for creative achievement in avant-garde productions. A Special Citation has been awarded to the film *Round and Square*, a joint production of a student film group at Wayne State University under the faculty sponsorship of

William Rudy. A variety of experimental techniques and styles are considered in selecting prize-winning films. *New York, New York* uses distorting lenses and multiple images. The Swedish film is a comedy employing some of the techniques of Mack Sennet comedies. The Foundation also presents an Award of Distinction. Films receiving this award are *Who, What, How* by A. Vanderbeck of New York; *An Diesen Abenden* by Herbert Vesely of Germany, and *The Big O* by Carmen D'Avino of New York.

The honorary degree of **Master of Photography** has been awarded by the Professional Photographers of America to John I. Crabtree, retired Kodak research scientist (*Journal* p. 78, Feb. 1957) and to Wesley T. Hanson, Jr., head of the Color Photography Div., Kodak Research Laboratories.

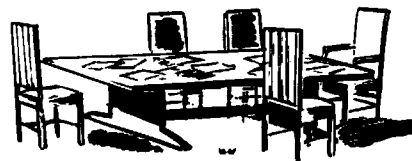
Described as "one of the leading authorities of the world on photographic chemistry," the citation to Mr. Crabtree stated that "many of the advances in general photographic, medical, x-ray and motion-picture film-processing techniques had their beginning in the research undertaken and supervised by this distinguished scientist." Dr. Hanson's award is in recognition of his research work over a 20-year period in problems of color photography. "The results of this work," the citation states, "have had important applications in all varieties of color photographic products for amateur, professional and commercial use, both still pictures and motion pictures." Both men are Fellows of this Society.

A paper on "Rates of Solution of Silver Halide Emulsion Crystals" by Waldemar Vanselow and T. Howard James, of Eastman Kodak Co. was presented at the 32d National Colloid Symposium in Urbana, Ill., June 19. The paper described research leading toward improved photographic developers, including those for fine-grain photographic materials. The paper is scheduled for early publication in the *Journal of Physical Chemistry*.

Robert W. Wagner, Director of Motion-Picture Production at Ohio State University since 1946, has been appointed head of the Cinema Department, Univ. of Southern Calif. Dr. Wagner succeeds Robert O. Hall who has been appointed Program Associate with the Educational Radio and Television Center at Ann Arbor, Mich. Prior to his appointment at Ohio State Univ., Dr. Wagner had been film writer and director for the Office of War Information and motion-picture producer with the Office of Coordination of Inter-American Affairs. He also served as Chief of Information with the Ohio Department of Public Welfare. In 1951 he was awarded the Encyclopedia Britannica Film Fellowship.

George L. Oakley, most recently Manager of Bell & Howell's Professional Equipment Div., has been appointed Director of Audio-Visual and Professional Sales for Bell & Howell under its policy of increased emphasis on the audio-visual field.

## engineering activities



This report is a brief résumé of major topics discussed and projects reviewed during meetings of the Engineering Committees at the Society's 83rd Convention.

### Color

Activities of Color Subcommittees were reviewed. Two Subcommittees, Color Sensitometry and Color Cinematography, were dissolved, following a vote of appreciation for excellent reports on *Principles of Color Sensitometry* and *Elements of Color in Professional Motion Pictures*, respectively. These publications were received with interest by the industry and are now widely accepted as standard works.

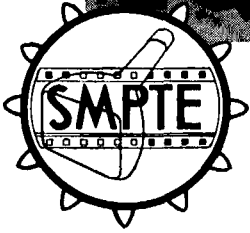
A proposed American Standard which would supplement PH2.1-1952 by specifying spectral conditions suitable for determining the sensitometric characteristics of photographic sound record on three-component subtractive color film was discussed. Prior to the meeting a letter ballot had been circulated to the Committee members. The results were inconclusive and the proposal was referred back to the Subcommittee on Densitometry of Soundtracks of which Harry P. Brueggemann is Chairman.

Appointment of four new members was requested by the Committee Chairman A. M. Gundelfinger. The proposed appointees have excellent backgrounds in color television which the Chairman felt would be an asset to the Committee in connection with the television requirements peculiar to the Color Committee's activity. The specific scope of activity of the Committee was discussed. In response to a question about possible overlap in the work of the Television and Color Committees, a Subcommittee was appointed under the chairmanship of S. Eric Howse to investigate the areas of activity and to recommend, if necessary, a clarification or revision of the scope of activity of the Color Committee.

### Film Dimensions Committee

One of the main topics of discussion concerned a worksheet submitted to members of ISO/TC Working Group A. It was brought out in discussion that the dimensions were the major source of difficulty since the English system is the fundamental standard in the United States, whereas the metric system is the basis of European standardization. The conversion from inches to millimeters results in some slight discrepancies. It was also noted that this worksheet differed from the one submitted at the last meeting of the Committee in that all of the information required in writing a standard, with the exception of notes, was included. The question was raised if it was the intent of the Committee to process all film dimension standards according to the present worksheet. It was agreed that 1953 standards PH22.1, PH22.5, PH22.12 and PH.93

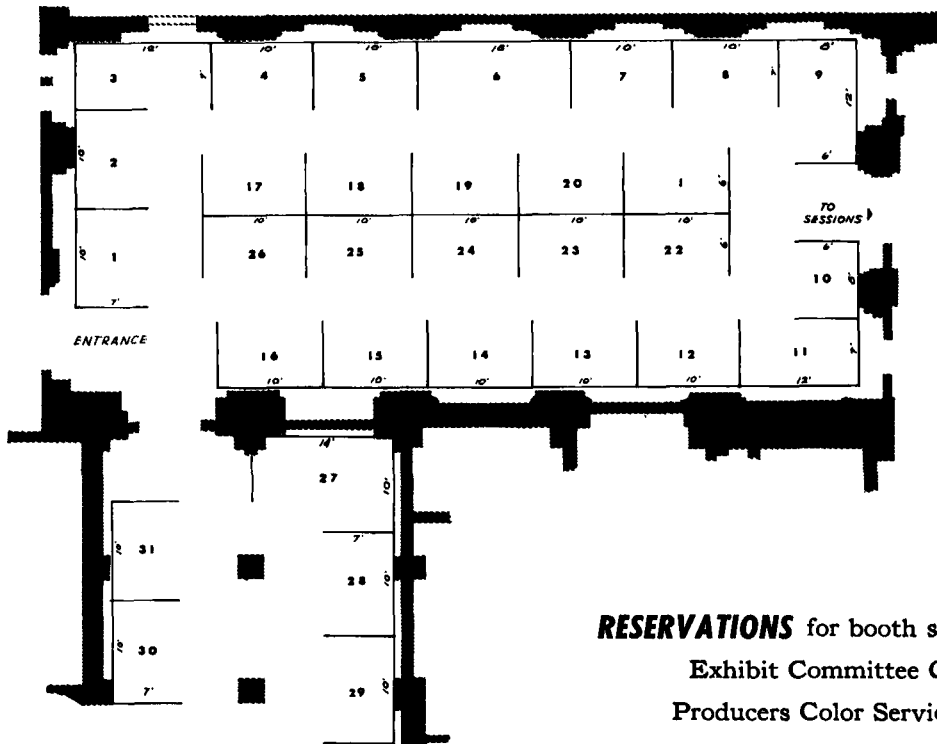
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be circulated in accordance with the new format. This decision does not affect PH22.109 and PH22.110 as these have been approved by PH22 and are now receiving final consideration by the ASA Committees.

Among other matters discussed was a list of terms, which was submitted to the Committee, describing the letters used in relation to film dimension standards. It was decided to incorporate this list of terms in the table of dimensions.

#### Film Projection Practice Committee

Following careful discussion and comparison of two 35mm visual test films, one based on a report presented by Walter Beyer at a previous meeting and the other based on the results of the theater survey conducted by the Motion Picture Research Council, it was decided to adopt the MPRC film. The film will have the credit line: "Prepared by the Motion Picture Research Council — Adopted by the Society of Motion Picture and Television Engineers."

Other topics of discussion included: Indiscriminate Placement of Cue Marks; CinemaScope Sprocket Standards; Heat Control at the Aperture Gate; and PH22.4, 35mm Motion-Picture Reels and Spindles.

Various cue-mark placement practices used for anamorphic release prints and wide-screen prints were demonstrated by Mr. Beyer. Research Council Industry Practices No. 30 and 31, dated February 5, 1958, recommending a cue-mark placement that is visible on the screen for all aspect ratios, were reviewed. It was agreed to forward comments of the Committee to the Laboratory Practice Committee for consideration in relation to PH22.55 which is under that Committee's jurisdiction.

A discussion on PH22.4, 35mm Motion-Picture Projection Reels, centered around the overall diameter and hub size dimension for 1000-ft reels. It was questioned whether the diameter should be 11 or 11½ in. Mr. Beyer offered to make a test with color film with magnetic striping to determine whether the 11- or the 11½-in. diameter is the more desirable. A fourth draft of the proposal, based on results of the test, will be submitted to the Committee.

The Staff Engineer reported that there had been several requests for a 35mm jump and weave standard. It was agreed to investigate the technical considerations involved in writing such a standard.

#### High-Speed Photography

Plans for the Fifth International High-Speed Congress, which will be held concurrently with the SMPTE 1960 Fall Convention, were discussed. Participation by military and industry representatives will be invited. It was decided to consult with members of the State Department and, in the near future, to initiate correspondence with possible participants.

A report was presented by the Subcommittee appointed to propose a revision of the official scope of the activity of the Committee. A definition to be voted upon by Committee members states: "To use all of the resources of the Society to further the art of recording and evaluating information from events which require observations taken at abnormal frame rates (i.e., high-speed or time-lapse) or with short exposure time.

Furthermore, the Committee will propose standards and specifications for use with relevant equipment."

A report from the Subcommittee appointed at the last meeting of the Committee (April 1958 *Journal*, p. 264) to explore areas of overlap of activity, particularly in regard to SPSE, indicated that an overlap did exist, but with no specific conflicts at present.

#### Laboratory Practice

Topics discussed included proposed Standards and revisions which are under consideration by the Committee: PH22.56, Nomenclature for Motion-Picture Film; Z22.55-1947, 2000-ft Release Print Standard; Brightness of Review Room Screens; A&B 35mm Printing; and PH22.27, Method of Determining Transmission Dens-

ity of Motion-Picture Films. PH22.37, Raw Stock Cores for 35mm Motion-Picture Film, previously under the jurisdiction of the Film Dimensions Committee, has been referred to the Laboratory Practice Committee. F. J. Scobey was appointed Chairman of a Subcommittee to study the Standard and to make recommendations as to its reaffirmation, revision or withdrawal.

Publication of the booklet on **Control in Processing Black-and-White Motion-Picture Films**, which has been approved by the Board of Governors, was discussed. A report from the Subcommittee, of which W. I. Kisner is Chairman-Editor, stated that the schedule called for delivery of the final manuscript to Society headquarters before January 1, 1959, and publication in April 1959.



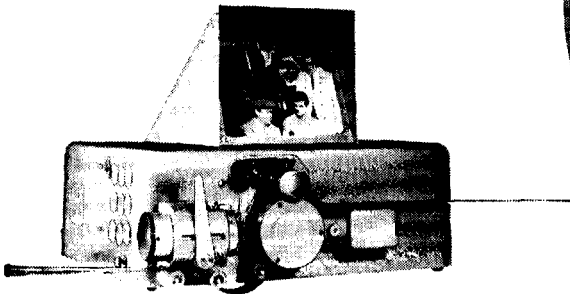
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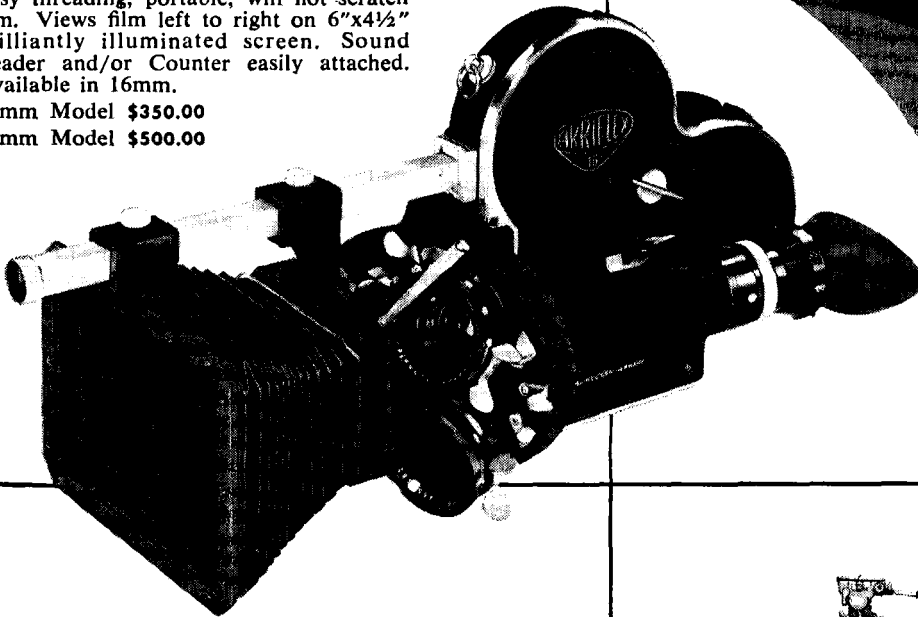
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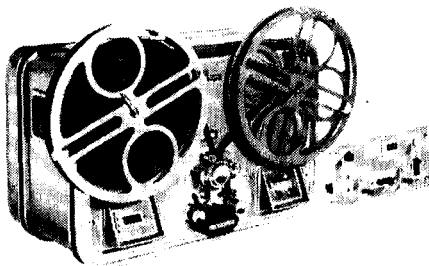
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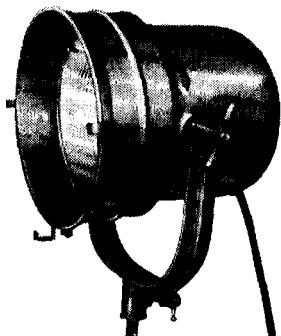
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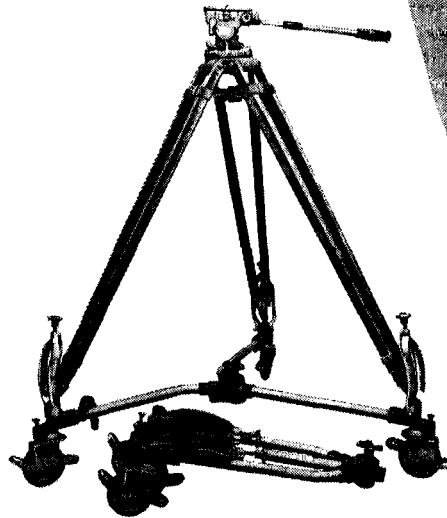
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### Motion-Picture Studio Lighting Committee

Topics discussed by the Committee included: (1) *Net Transmission Standards*: A subcommittee was appointed to investigate nomenclature. (2) *Standardization of Pin Plugs*: It was agreed to ask M-G-M to suggest dimensions for a Standard or recommended practice. (3) *Window Filters*: A proposal for a recommended practice specifying transmission characteristics and possible materials for window daylight correction filters for tungsten-balanced film will be circulated to the Committee.

A Subcommittee was appointed to make an exploratory study of arc units with the intent of recommending a method of operation, maintenance and service.

### Screen Brightness

Topics discussed included Theater Screen Luminance for Indoor Theaters; Luminance of White Matte Screens; Screen Luminance for Review Rooms; and Templates for Locating the Screen Areas to Be Measured in Determination of Screen Luminance. On the last subject, majority opinion held that it would be desirable for the Society to make special templates available to aid in the measurement of screen brightness.

Two British Standards on screen luminance, B.S. 2964:1958 and B.S. 2954:1958, were discussed. Additional study may be indicated.

Engineering Vice-President Axel Jen-

sen reported that the Closed-Circuit Television Subcommittee has requested assistance of the Screen Brightness Committee in measuring television screen brightness (particularly in measuring incident light) and with other matters having to do with nomenclature.

### Sound

The Staff Engineer reported on the status of five completed projects. Nine 1953 Standards, which had been circulated for review, were discussed.

A lengthy discussion took place on the ISO-SMPTE Replay Characteristic. The history of the problem concerning the unmodified CCIR which has been adopted by the Europeans was reviewed. It was noted that the British have recently circulated a draft Standard which proposes a flat film in accordance with the CCIR characteristic, without the optional de-emphasis desired by the United States. It was brought out in discussion that resolution of United States and European differences on frequency characteristics would not be easy. The Committee voted that the Society circulate a film prepared by Westrex in accordance with the unmodified CCIR characteristic for the purpose of study, evaluation and equipment trial.

Other matters reported upon included Multi-Azimuth Test Film; PH22.44, 16mm Multifrequency Test Film; PH22.82, Sound Transmission of Perforated Projection Screens; PH22.40, Photographic Sound

Record on 35mm Prints; and PH22.88, Magnetic Coating of 8mm Motion-Picture Film.

### Standards

A report on 44 proposals currently in the process of becoming American Standards was presented by the Staff Engineer. The report did not include those still under study or in the preliminary stage of development. The work of the Committee was discussed and suggestions were made for procedures which would expedite the processing of Standards while allowing sufficient time for thorough investigation and discussion of all technical questions.

### Television

The extent of the Society's activity in the field of television was discussed at length in relation to definition of the proper limitation of the Committee's interest. In response to an inquiry about whether the jurisdiction of the Society includes the conversion of the optical image to an electrical signal, a number of divergent opinions were expressed. An active liaison policy was proposed. It was also unanimously agreed that members of the Color and of the Television Committees should be appointed to represent the Society in related activities. It was agreed to reconsider this matter at the Fall meeting.

Engineering Vice-President Axel Jensen reported that at the last meeting of the Board of Governors, Howard Chinn had been appointed Chairman of an ad hoc committee to explore the area of magnetic video recording and to make recommendations as to possible activities of the Society in this field. Following presentation of a preliminary report it was generally agreed that the Society should undertake overall guidance of video-tape recording and should request assistance of other groups in order to meet this major responsibility. The need for tape test material was indicated and it is expected that a permanent SMPTE Video Magnetic Recording Committee will be formed.

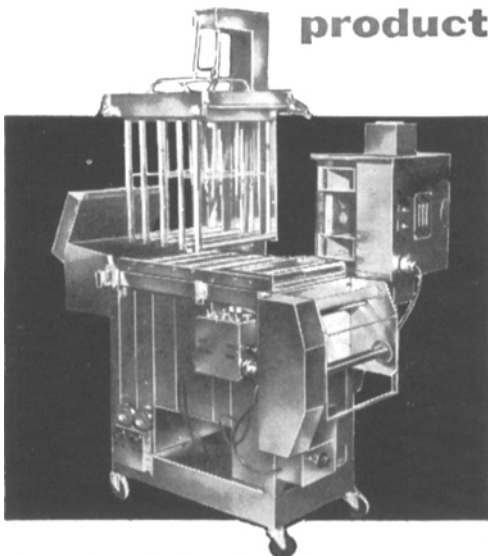
In a subsequent action, a Video Tape Recording Committee, under the chairmanship of Howard A. Chinn, was constituted by the Society's Board of Governors at their July 11 meeting. The scope of activity of this committee is: "To propose standards and good engineering practices for the construction, adjustment, operation and measurement of video tape recording and reproducing equipment and for those video tape dimensions or other characteristics which affect performance and interchangeability."

### ASA Sectional Committee PH22

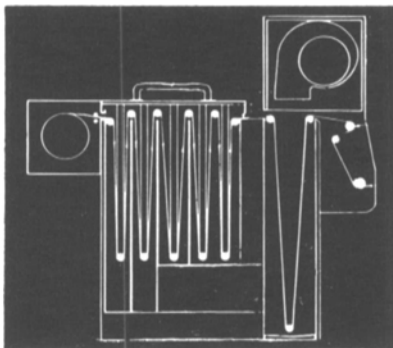
Brief reports were presented by the United States members of the seven working groups. Main purpose of the meeting was to discuss plans for the meeting of ISO/TC 36 scheduled to be held in Harrogate, England, June 16-20 — J. Howard Schumacher, Staff Engineer.

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