

TECHNICAL NEWS

There appears in this issue of the JOURNAL a distinct innovation in the policies which have governed the Society's publications in the past.

In accordance with an authorization passed by the Board of Governors on April 16, 1944, a section devoted to more or less current "Technical News" will appear in the JOURNAL about every 3 months. It is hoped that the various items of Technical News will not only be of interest in themselves to the members of the Society, but will also result in more detailed articles describing applications of the ideas to various phases of the production, distribution and presentation of motion pictures, and in allied fields.

Technical advancements in the motion picture industry are often delayed in their publication to the point where their news value is lost. There are also occasions when technical advancements are made which are never published. It is the intent of this Committee, therefore, to be on the alert and obtain as much technical news as possible for publication in the JOURNAL as news items. In many instances it will be necessary that permission for publication be obtained. However, since these items will not contain more than basic facts, it is felt that the Committee can serve a useful purpose to the Society membership in keeping them abreast of the times technically.

The items* appearing in this section have been contributed by the members of the following Technical News Committee:

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* Submitted May 19, 1944.

Laboratory Practice

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The Committee will welcome and consider items of current technical interest from any member of the Society.

COLOR

Technicolor Motion Picture Corporation.—The following was taken from Technicolor's Annual Report:

"Improvements in monopack procedure: Among the feature pictures produced in Technicolor was *Lassie Comes Home* distributed during 1943 by Metro-Goldwyn-Mayer. The photography of this picture was largely exterior and from the Technicolor point of view was an experiment in monopack. The great beauty of the picture and its favorable reception at the box office speaks for the success of the experiment. But it only went part way because the monopack procedure will have to be improved so as to be satisfactory for the photography of interior studio scenes illuminated by artificial light as well as exterior scenes illuminated by daylight. Research work to this end has been undertaken by your company's research laboratory in cooperation with Eastman Kodak Company so that the Technicolor monopack process may gradually supersede the present Technicolor 3-strip process and thus eliminate the necessity of special Technicolor cameras."

In addition to the foregoing, *Thunderhead* was produced in monopack and another major feature, *Son of Lassie*, is reported to be scheduled for early production.

Producers Releasing Corporation.—Plans are under way for the production of a feature-length picture by PRC making use of 16-mm Kodachrome for photography and the Cinecolor 35-mm 3-color process for release prints. Production on the picture is scheduled to start in June. Utilizing the above-mentioned material and process, several short subjects and a feature-length picture are already in production in Mexico City.

LABORATORY PRACTICE

Eastman Kodak Company.—During May, 1944, the Eastman Kodak Company submitted to the motion picture industry in Hollywood a new fine-grain variable-density sound recording film having the code No. 1373. This film is suitable only for variable-density

work and has excellent characteristics for this type of sound recording. The chief feature of this film is that it was made for development in a normal borax picture negative developer.

Most variable-density sound films are of the positive-film type, that is, of high basic contrast. In order that they might be used successfully at low values of gamma, it is necessary to use dilute borax-type solutions, which are often difficult to maintain. It is believed that a film of low basic contrast designed for development in a normal negative solution is a step in the direction of better sound negative control.

Walt Disney Productions, Inc.—A method recently developed at the Walt Disney Studios for edge numbering 16-mm Kodachrome is now in use, and further improvements in it are under way. Among other things, it contains several unique features which probably will be disclosed in a paper to be presented to the Society.

Cinecolor, Inc.—In order to speed up work and facilitate production to accommodate increasing demands for 35-mm 3-color prints from 16-mm Kodachrome, Cinecolor, Inc., has plans under way for the expansion of its contract and optical printing facilities. Toward this end construction of a new Acme Dunn Optical Printer is nearing completion at the Acme Tool and Manufacturing Company of Burbank, California. This printer will be installed shortly in the Cinecolor laboratory in Burbank.

SOUND

Warner Bros. Pictures, Inc.—The latest production technique, which requires that motion picture sets simulate the structures that they are to represent with greater realism, has forced the Sound Department to construct a special microphone boom for small sets. The new boom is a little over 6 ft high, which is about half the usual size, and the boom arm may be extended to 14 ft. Its small size and relatively light weight, which is about 140 lb, save considerable production time when working in constricted spaces.

Work is nearing completion on a new reverberation chamber which is 25 ft sq and 10 ft high, and will have a reverberation time of 7 sec. The novel feature of this chamber lies in the arrangement of directional microphones to control the amount of reverberation required.

RKO Radio Pictures, Inc.—In order to effect film saving and get recorded material back from the film laboratory more rapidly, direct-positive Class B recording is used on certain sound effects,

and where taps are recorded to be later added to dance routines. A further advantage is that clipping is avoided since no noise reduction is necessary. When it is considered that as much as 10,000 ft are often shot for one solo dance routine, the amount of film saved by not having prints can be appreciated. The direct positive is reproduced on an ordinary re-recording machine.

The use of various kinds of microphones in the studio has made it necessary to have a universal microphone hanger, which in this case is a kind of fixture with 2 rapid-acting thumbscrews so that one type of microphone may be substituted for another quickly.

In order that the film recordist may not leave a 3-position key in a nonrecord position during a take, a second pair of contacts has been added for the nonrecord positions which are energized by the starting system and cause a buzzer to operate continuously until the key is restored to its proper position.

Walt Disney Productions, Inc.—In recording of foreign versions of cartoons, a humming track is made of all choral groups so that this material may be used in certain foreign versions where singers for that particular language cannot be obtained.

To create the effect of music or dialogue in underwater scenes, such as appeared in the picture *Pinocchio*, the sound track was reproduced on a machine from which the flywheel had been removed. The resultant speed variations created a warbling effect. This effect can also be greatly intensified by leaving the film gate open so that, in addition to the speed variation, the sound track tends to go in and out of focus.

Republic Pictures Corporation.—The automatic marker system at Republic Studios utilizes the existing camera power cables as a carrier system for the current supplied to the marker lamps at the camera and sound heads. A 2000-cycle signal generated by an oscillator in the sound truck energizes the marker lamps and a series resonant filter system is used to obtain minimum insertion loss at 2000 cycles and maximum loss at 60 cycles.

Paramount Pictures, Inc.—Paramount has instituted a practice of vacuum cleaning all sound negative after it has been recorded, and before it goes to the laboratory. This practice has resulted in an appreciable decrease in negative film noise. The vacuum cleaning equipment was developed at Paramount.

A system has been developed wherein phase No. 2 of the stator between the distributor and the load is metered to indicate to the

recorder the number of cameras, *etc.*, that are on the line. The meter is calibrated in terms of the machines on the line, and it operates so effectively that the recorder can even tell when there is no film in the camera.

STUDIO LIGHTING

Recognizing the part motion pictures are playing in the war effort, the WPB has issued priorities which are making possible the production of additional lighting equipment for motion picture studio use.

There is a growing tendency in the use of light meters by Chief Set Electricians. The Chief Set Electrician, under the direction of the Director of Photography, is responsible for the placement and operation of all lighting equipment, and the light meter is proving a valuable means of control.

(Ed. Note: Additional information concerning the items above, or the equipment and processes discussed, may be obtained by communicating with the general office of the Society, Hotel Pennsylvania, New York 1, N. Y.)