

We wish to appeal to the members of the Society to give us all possible help for our preparation of better recommendations. Any technical information about the use of 16-mm sound projectors for the imparting of knowledge will be welcome. It will reach us safely if it is sent to Boyce Nemeck, Engineering Secretary of the Society. We are especially interested in reaction to American War Standard *Z52.1-1944* issued by the American Standards Association and to the allied specifications included in that standard as appendices.

## REPORT OF THE COMMITTEE ON STANDARDS\*

F. T. BOWDITCH\*\*

During recent months the Committee on Standards has become increasingly active. While the war was in progress, most standardization was done in the interests of the Armed Forces, under the auspices of special war committees of the American Standards Association on which many members of the Committee on Standards served. A great quantity of war standardization resulted which now requires consideration from a peacetime point of view. In addition, these new standards called attention to the need for modernization of older ones. First consideration of this matter was given by ASA Sectional Committee on Motion Pictures Z22, under the chairmanship of Clyde R. Keith.

In line with this procedure, Z22, in a meeting last October, reviewed all Motion Picture Standards then in existence, both the prewar Z22 Standards and the War Standards developed by Z52. Of the 53 standards so reviewed, 20 were reaffirmed in their existing form and six others have since been approved with minor editorial changes. These 26 have now been referred to the United Nations Standards Co-ordinating Committee for inclusion in their agenda. Of the remaining 27, three are under consideration by subcommittees of Z22, two have been referred to the Research Council of the Academy of

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\*\* Chairman.

Motion Picture Arts and Sciences, and 22 have been referred to the Committee on Standards of the SMPE.

This large number of standards was referred to our Committee primarily because each one of them represents a special technical problem. After several years of relative inactivity, we were thus suddenly faced with a task sufficient to occupy us for several years at the normal prewar pace of such work. Moreover, the ASA specifically requested prompt action on all these standards in order that as many as possible might be made ready for submission to the United Nations Committee before its first technical meeting.

In order to implement this work six subcommittees of the Committee on Standards have been formed, and each assigned a group of related standards for early consideration. These include subcommittees on

- (a) *Projection Reels*, with three projects, under the chairmanship of D. F. Lyman;
- (b) *Photographic Density and Sensitometry*, with two projects, under the chairmanship of D. R. White;
- (c) *Cutting and Perforating Raw Stock*, with five projects, under the chairmanship of E. K. Carver;
- (d) *16-Mm and 8-Mm Camera and Projector Apertures*, with six projects, under the chairmanship of John A. Maurer;
- (e) *16-Mm and 8-Mm Projector Sprockets*, with four projects, under the chairmanship of Otto Sandvik; and
- (f) *Film Splices*, with two projects, under the chairmanship of Wm. II. Offenhauser, Jr.

All of these subcommittees are actively at work and the revision of six of the 22 standards has now been agreed to in subcommittee and submitted to letter ballot of the parent Committee.

Another project of perennial interest to the Committee is that of the Glossary of Motion Picture Terms. After working on this task intermittently during the war years, the job, instead of diminishing toward completion, has actually grown larger as the result of the introduction of many new terms, while the manifestation of increased trade interest has further justified the early preparation of a glossary. This project has, therefore, been broken down into twelve parts according to field of interest. Nine of these are to be handled by present engineering committees, and three by special subcommittees of the Committee on Standards. It is hoped that in this way the task can be advanced to earlier completion with the publication of each section as it is finished rather than waiting for the entire job to be completed.

In 1941 an "SMPE Recommended Practice" with respect to the edge-numbering of 16-mm film was published in the *JOURNAL* for comment before consideration as an American Standard. A subcommittee of the Committee on Standards under the chairmanship of Lloyd Thompson was appointed about a year ago to review this situation. Mr. Thompson's subcommittee has recently recommended that this "Recommended Practice" be advanced to an American Standard, without change, that is with the specification of a 40-frame interval between numbers. The parent Committee at its meeting on May 8, 1946, approved this recommendation and authorized the first step toward American Standardization, that is, a letter ballot of the entire Committee on this Proposed Standard.

For many years a discussion has been active relative to the possible advantage of a 16-tooth intermittent projector sprocket larger in diameter than the 0.935-in. value now in use with 35-mm film. Laboratory tests have consistently indicated a much longer film life with a larger sprocket, but the practical application of such a sprocket had never been successfully accomplished. As long ago as 1930, American Standard *Z22.35* called for a diameter of 0.945 in. However, when this larger size was supplied to the trade in 1934, many complaints of noisy operation arose, attributed to sprocket wear by the film. Consequently, an expensive reversion to the 0.935-in. diameter followed with the result that *Z22.35* has never been a truly observed Standard.

In the recent war emergency the necessity for film conservation was responsible for a renewed consideration of this subject. A special Subcommittee on Intermittent Projector Sprockets for 35-Mm Film was formed under the chairmanship of Dr. E. K. Carver for this purpose. The committee had laboratory data indicating that at least double the film life could be obtained through the use of a larger sprocket. The problem was to determine how such a sprocket would stand up in service and if the initially apparent increase in film life persisted throughout sprocket life. After extensive tests with sprockets of several diameters in a number of theaters, the subcommittee found that the initial film saving does persist, and that sprocket wear is in no case faster and in many cases much slower than with the present 0.935-in. diameter sprocket. Increased projector noise, a possibility, originally the subject of much controversy, was simply nonexistent. The parent Committee has since approved by letter ballot the subcommittee's recommendation of an 0.943-in. diameter

sprocket and this recommendation had been in turn passed on to ASA Sectional Committee Z22.

Particularly in this last instance does the value of standardization become apparent. Potential saving in decreased film wear through adoption of this standard has more than justified the work of this committee, and we hope is typical of the engineering service which can now be supplied to the industry as a result of the recent central office expansion. A most important step in this direction is the acquisition of our full-time Engineering Secretary, Boyce Nemece, who can apply the needle when required to keep our projects on the move. Certainly we could not ask for better technical representation of the industry than that now provided on our present engineering committees. Under John Maurer's able direction, as Engineering Vice-President, and the application of Boyce's needle, we can expect real progress in the months to come.

## REPORT OF THE COMMITTEE ON STUDIO LIGHTING\*

C. W. HANDLEY\*\*

Previous papers and reports have catalogued and described motion picture studio lighting equipment. The purpose of this report is to show the light output at various beam divergences of *some* of the popular types of equipment and to give an indication of the light levels used by *some* directors of photography. This information should give the reader a basis for general conclusions on the question of how much light is used.

Practically all of the lighting equipment used around the tops of sets on parallels and much of the floor lighting is accomplished by means of spotlight units equipped with Fresnel-type lenses. These units are controlled as to spot diameter by moving the light source toward or away from the lens and are reduced in intensity at a given spot diameter by the use of frosted gelatin diffusers placed in front of

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\*\* Chairman.