Engineer, at Society Headquarters prior to 1 December 1975. The recommendation has been submitted to American National Standards Committee PH22. All comments received through *Journal* publication will be reviewed before conclusion of action by that committee.

Reaffirmed SMPTE Recommended Practices

On 24 July 1974, the Society's Board of Governors, accepting the recommendation of the Standards Committee, approved the reaffirmation of four SMPTE Recommended Practices: RP 6-1967, Reference Carrier Frequencies and De-Emphasis Characteristics for 2-in Quadruplex Video Magnetic Tape Recording (published in July 1967 *Journal*); RP 19-1965, Specifications for 8-mm Registration Test Film (published in January 1966 *Journal*); RP 20-1965, Specifications for 16-mm Registration Test Film (published in January 1966 *Journal*); and RP 32-1969, Specifications for a Super 8 Test Film for Projectors and Printers (published in September 1969 *Journal*).

Copies of these and other SMPTE Recommended Practices may be purchased from Society Headquarters for $1.00 each. A 20% discount is offered on the purchase of the entire set.

Approved International Standards

The International Organization for Standardization (ISO) approved two International Standards, the technical content of which is published here for your information.

ISO 3026-1975, Cinematography — Printed 8-mm Type S Image Area on 35-mm Motion-Picture Film Perforated 8-mm Type S, 2R-4.227 (1664) or 5R-4.234 (1667) — Position and Dimensions, is in complete agreement with American National Standards PH22.179 and PH22.180.

ISO 3027-1975, Cinematography — Magnetic Stripes and Recording Head Gaps for Sound Record on 8-mm Type S Motion-Picture Prints — Positions and Width Dimensions, is in complete agreement with American National Standards PH22.162 and PH22.181.

The International Standards published here were developed by Technical Committee 26 on Cinematography. The work of this committee is administered by the Engineering Department of the SMPTE which functions as the secretariat in ANSI's name. A report of the last meeting of the committee was published in the February 1974 *Journal of the SMPTE.* The next meeting is scheduled for 17 May 1976 in Paris, France.

Complete copies of all International Standards are sold through the American National Standards Institute, 1430 Broadway, New York, NY 10018. — Alex E. Alden, *Staff Engineer*

Erratum

International Standard
ISO 1019-1975E
August 1975 *Journal,* pp. 624, 625.

An incorrect first page was printed for ISO 1019-1975E. To simplify as much as possible the reader's task in referring to this Standard, we here present the entire three pages of the Standard as they should have appeared.

INTERNATIONAL STANDARD — ISO 1019-1975 (E)

Cinematography — Spools, daylight loading type for 16 mm motion-picture cameras — Dimensions

1 SCOPE AND FIELD OF APPLICATION

1.1 This International Standard specifies the dimensions and characteristics of daylight loading spools of nominal capacities 15 m (50 ft), 30 m (100 ft), 60 m (200 ft), and 120 m (400 ft) for 16 mm motion-picture film.

The dimensions specified are in substantial agreement with those given for microfilm camera supply and take-up spools in ISO/R 1116, *35 mm and 16 mm microfilms, spools and reels* (see annex).

1.2 Spools for high-speed cameras should be carefully balanced and are not necessarily covered by this International Standard.

2 REFERENCES

ISO 69, *Cinematography — 16 mm motion-picture raw stock film — Cutting and perforating dimensions.*

ISO 3647, *Cinematography — Spindles for 16 mm motion-picture camera spools and projector reels — Dimensions.*[1]

3 DIMENSIONS AND CHARACTERISTICS

3.1 The spindle and keyway holes shown in the figure shall be incorporated in both flanges[2] and shall be aligned. (Some laboratories use 35 mm rewind equipment for winding 16 mm film; often the spindles on this equipment have long keys.) A second keyway, in the corner of the spindle hole opposite the required keyway, is optional, but if used, shall be incorporated in both flanges.

3.2 If rivet heads or other fastening devices extend beyond the outer surfaces of the flanges, they shall lie at a diameter larger than the minimum K diameter and shall be within the boundaries defined by other portions of the volume of rotation diagram.

3.3 Dimension F refers to a slot in the spool core for attaching the film. The slot sides, starting immediately adjacent to each flange and running a minimum distance 6,0 mm (0.24 in) from each flange toward the other, shall be straight, parallel, and 0,7 to 1,5 mm (0.03 to 0.06 in) apart. The slot sides may diverge over remaining (central) portions of the slot.

3.4 Dimensions J and J_1 represent the thickness and effective thickness respectively of the spool within the K diameter area which is centred on the spindle hole axis of each flange.

3.5 A reference plane of rotation for each flange is defined by a plane perpendicular to the axis of the spindle and coincident with the surface of a flat 15,0 mm (0.59 in) diameter support which is in contact with the flange and centred on the spindle hole axis of the flange.

The dimension P is the distance measured outwardly from this reference plane[3] of rotation to the farthest plane of rotation described by any point on the flange outside the K diameter area when the spool is rotated on an accurate, tight-fitting spindle. This includes rivets or other fastening devices, variations in flange thickness, flatness, and lateral run-out of the flanges.

Selection of a dimension P value is dependent upon the thickness of the material used for the flanges. According to the flange material thickness:

a) the K diameter area may be depressed (with P greater than zero), or

b) the outside surfaces of the flanges may be flat from spindle hole area to periphery (with P equal to zero), or

c) in the case of flanges made of very thin material, the K diameter area may be raised rather than recessed (effectively, P less than zero).

3.6 The maximum effective thickness of spools (including all the characteristics mentioned in 3.5) outside the K diameter area has not been stated because it is a function of a spool's specific J_1 value between the 15,0 mm (0.59 in) diameter reference zones on each flange. The largest overall effective thickness, however, will be J_1 max. + 2 × P max. = 19,5 mm (0.77 in).

3.7 The eccentricity of the core with respect to the spindle hole axis, Z, shall not exceed a *total* radius variation (total indicator reading) of 0,8 mm (0.03 in) for all spool sizes.

3.8 Flanges shall be opaque and their surfaces shall have low reflectance characteristics.

NOTE — When the loaded camera is viewed from the side with the lens to the left and the bottom of the housing downward (regardless of whether or not the spool loading mechanism is visible from that side), both the supply and take-up spools rotate in a clockwise direction.

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1) At present at the stage of *draft.*

2) Some spools exist which have one flange with the construction recommended in 3.1, but the other flange with a round hole which has a diameter equal to dimension C. This older design is recognized temporarily, but is not recommended for future construction.

3) The reference plane from which P is measured is not necessarily coincident with all points within the K diameter area but only needs to be coincident with those which are in contact with the reference support which has a diameter smaller than K.