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RP 149-1992
Revision of RP 149-1988

SMPTE RECOMMENDED PRACTICE

Dimensions of Transverse Cemented Splices on 16-mm and 8-mm Type R Motion-Picture Film

1 Scope

1.1 Specifications

This practice specifies the dimensions of transverse cemented splices on 16-mm and 8-mm type R motion-picture film.

1.2 Types

Two types of splices are specified: a laboratory splice for professional applications and a projection splice for release prints and consumer or amateur reversal films.

1.3 Excepted splicers

It is not intended that this practice be prejudicial to diagonal, scarf, or tape splicers.

2 Dimensions

2.1 Specifications

The dimensions shall be as given in the figures and tables.

2.2 Film width at splice

Film width at the splice shall not exceed 0.317 in (8.05 mm) for 8-mm type R film and 0.630 in (16.00 mm) for 16-mm film. If the film has been widened during scraping, the extra width shall be removed.

2.3 Lateral offset for perforation overlap

Perforation overlapping shall not be offset laterally by more than 0.002 in (0.05 mm).

2.4 Lateral offset for film edges

Edges of the two spliced films shall not be offset laterally by more than 0.002 in (0.05 mm) unless a difference in the lateral shrinkage of the two strips makes it impossible to maintain the tolerance. Shoulders formed by such misalignment shall be beveled after the cement has dried.

2.5 Angle between edges

In the plan view, the angle between the respective edges of the spliced films shall be $180° \pm 4'$. Thus, the spliced film shall be aligned to the extent that, when one portion of the film is placed against a straightedge, the other portion will not deviate more than 0.006 in (0.15 mm), which is the approximate film thickness, in 6 in (152 mm).

Approved September 18, 1992

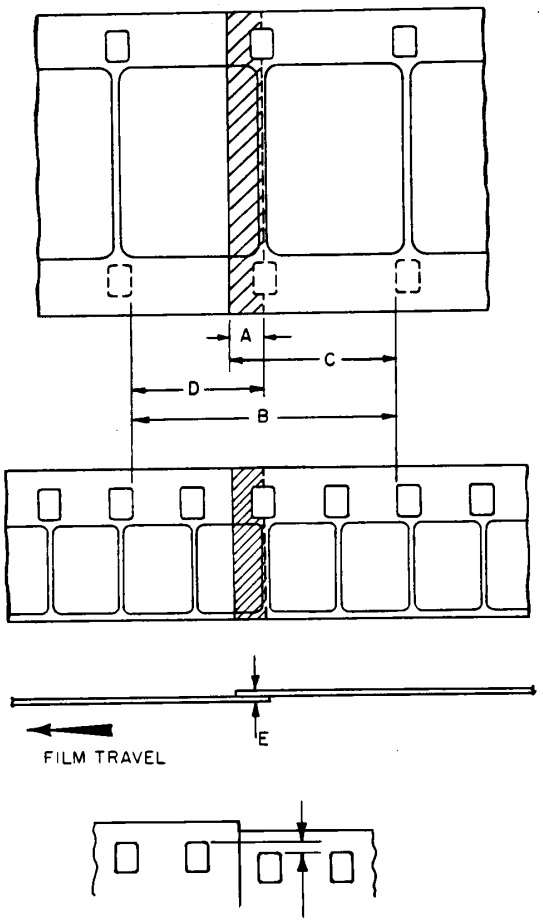

Figure 1 – Laboratory splices

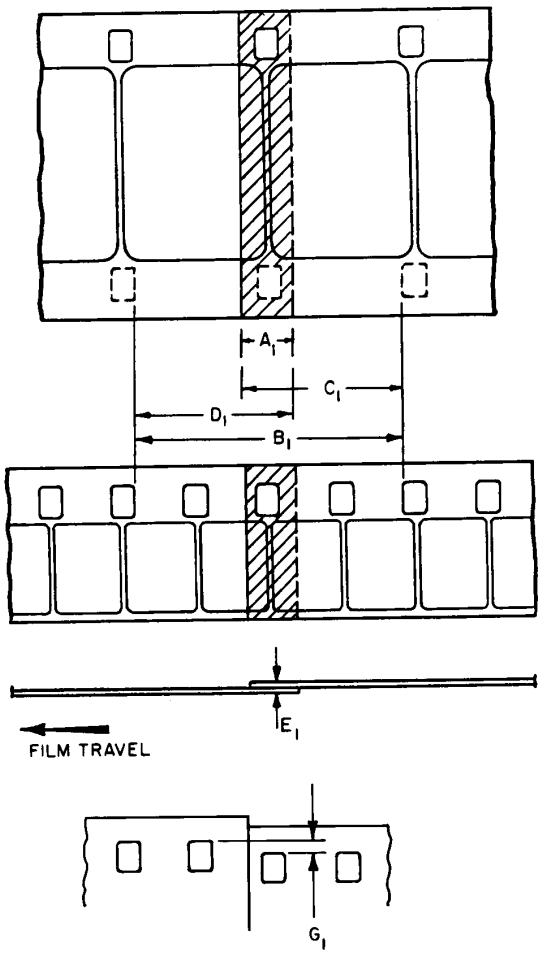

Figure 2 – Projection splices

Table 1 – Laboratory splice specifications

Dimensions	Inches	Millimeters
A	0.070 ± 0.003	1.78 ± 0.08
B	0.548 ± 0.001	13.92 ± 0.03
C	0.344 ± 0.003	8.74 ± 0.08
D	0.274 + 0.000 – 0.003	6.96 + 0.00 – 0.08
E	0.012 max	0.30 max
G	0.002 max	0.05 max
NOTE – Tolerances shown are not to be cumulative.		

Table 2 – Projection splice specifications

Dimensions	Inches	Millimeters
A_1	0.100 + 0.000 – 0.005	2.54 + 0.00 – 0.13
B_1	0.548 ± 0.001	13.92 ± 0.03
C_1	0.324 + 0.000 – 0.003	8.23 + 0.00 – 0.08
D_1	0.324 + 0.000 – 0.003	8.23 + 0.00 – 0.08
E_1	0.012 max	0.30 max
G_1	0.012 max	0.05 max
NOTE – Tolerances shown are not to be cumulative.		

Annex A (informative)
Explanatory notes

A.1 Dimension B (or B_1)

Dimension B (or B_1) controls the longitudinal registration of the two films being spliced. It is measured to the perforations that are most commonly used for registration on splicing blocks, and to the nearer edges of these perforations, which are generally used for registration.

A.2 Dimensions C and D

Dimensions C and D were chosen to give a splice which has one edge along the frameline. This provides the so-called invisible splice when printing A and B rolls of original photography.

A.3 Orienting the films

It is desirable to orient the films in splicing so that a magnetic head scanning the film would, at a splice, drop down onto the trailing film rather than bump up onto it.

A.4 Preventing white line

In order to prevent the appearance of a white line on the screen, the scraped area should be 0.001 in to 0.003 in (0.03 mm to 0.08 mm) narrower than the area covered by the overlapping film. Presence of this narrow uncemented area will not shorten the life of the splice.

A.5 Striped film

If the film being spliced contains a stripe, the stripe must be removed from the base of the film falling on top of the mating piece.

A.6 Splicing technique

Emulsion and binder must be completely removed by scraping in order to ensure a strong, long-lasting cement bond. The surface on the base side of the film to be joined must also be thoroughly cleaned. Sometimes it may be helpful to roughen the base surface slightly when certain films resist satisfactory splicing.