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SMPTE RECOMMENDED PRACTICE

RP 111-1999

Revision of RP 111-1994

Dimensions for 70-, 65- and 35-mm Motion-Picture Film Splices



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1 Scope

1.1 This practice specifies the significant dimensions of splices for 70-, 65-, and 35-mm motion-picture film intended for projection and exhibition or for laboratory printing.

1.2 There are a number of methods for splicing triacetate or polyester motion-picture film that have found practical and commercial acceptance and that meet the operational requirements for the physical strength of the bond. This practice is not intended to recommend one method over another, but rather to emphasize the requirements common to all splices.

2 Applications

2.1 Within the motion-picture technology, splices are employed in two different contexts with correspondingly different permissible tolerances:

2.1.1 Projection applications

The film is usually a print and the primary objective is for the splice to be unobtrusive in the projected image and the reproduced sound. Film guiding and positioning are usually achieved through the film seeking an equilibrium position within a system that introduces high tolerance edge guiding for lateral positioning, and perforation reference against a loose-fitting tooth or claw for vertical positioning. The splice used in projection applications will have slightly broader dimensional tolerances than the splice used in laboratory applications.

2.1.2 Laboratory applications

The film may be negative or positive, camera original or intermediate, etc. The primary objective is for the splice to be unobtrusive in the end product achieved through contact or optical printing, special effects, etc. The dimensional tolerances on splices are more readily controlled and the permissible tolerances are tighter than for the projection application in 2.1.1.

3 Dimensions

3.1 The dimensions shall be as given in the figures and tables and apply to processed films and leaders which contain nominal shrinkage up to 0.2%.

3.2 The film width at the splice shall not exceed

1.379 in (35.03 mm) for 35-mm films
2.561 in (65.05 mm) for 65-mm films
2.758 in (70.05 mm) for 70-mm films

3.3 The angle between the respective edges of the spliced films shall be $180^\circ \pm 3'$. 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 0.004 in (0.10 mm) in 5 in (127 mm).

3.4 Dimensions of the butt splices shall conform to dimensions B, E, G, and H, as specified in the tables.

3.5 Butt splices shall be made centrally on the frameline.