International Standard 6038

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Cinematography — Splices for use on 70 mm, 65 mm, 35 mm and 16 mm motion-picture films — Dimensions and locations

Cinématographie — Raccords sur films cinématographiques 70 mm, 65 mm, 35 mm *et* 16 mm — *Dimensions et emplacements*

First edition — 1985-10-01

UDC 778.582 **Ref. No. ISO 6038-1985 (E)**

Descriptors : cinematography, motion-picture film, dimensions.

Price based on 5 pages

Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 6038 was prepared by Technical Committee ISO/TC 36, *Cinematography*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

Printed in Switzerland

Cinematography — Splices for use on 70 mm, 65 mm, 35 mm and 16 mm motion-picture films — Dimensions and locations

1 Scope and field of application

1.1 This International Standard specifies the dimensions and locations of transverse cemented or welded overlap splices and butt splices on 70 mm, 65 mm, 35 mm and 16 mm motion-picture films and prints with magnetic or photographic sound records.

1.2 The following types are specified:

Type 1 — Laboratory type, overlap splice intended for negatives and intermediate films, perforated short pitch.

Type 2 — Projection type, overlap splice intended for prints with non-anamorphic type picture.

Type 3 — Projection type, overlap splice intended for prints with anamorphic type picture.

Type 4 — Projection type, overlap splice made with transparent adhesive tape and intended for prints.

Type 5 — Projection type specialized uses, butt splice made with transparent tape and intended for prints.

2 Dimensions

2.1 The dimensions specified in the tables apply to motion-picture films which contain nominal shrinkage up to 0,2 %, and recently made splices.

2.2 The dimensions of cemented or welded overlap splices for 16 mm motion-picture films shall be as shown in figures 1, 2 and 5 and given in tables 1 and 5.

2.3 The dimensions of the butt splice shall conform with the dimensions *B* and *E* as specified in the tables.

2.4 The dimensions for 70 mm, 65 mm and 35 mm motion-picture films shall be as shown in figures 3, 4 and 5 and as given in tables 2, 3, 4 and 5.

2.5 The film width at the splice shall not exceed

70,05 mm (2.758 in) — for 70 mm films;

65,05 mm (2.561 in) — for 65 mm films;

35,03 mm (1.379 in) — for 35 mm films;

16,00 mm (0.630 in) — for 16 mm films.

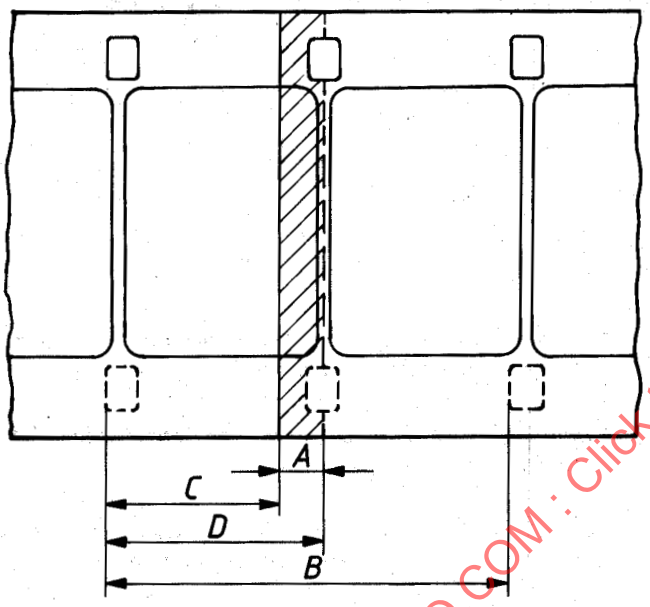

Figure 1 — Splices on 16 mm film laboratory type

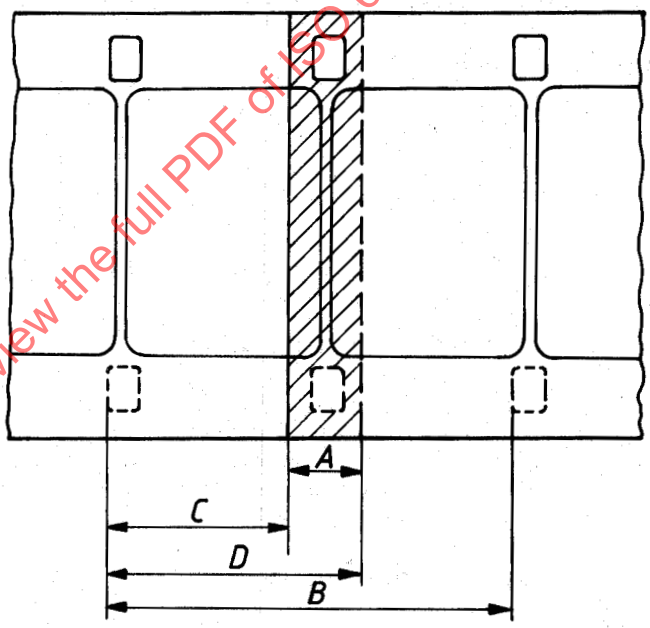

Figure 2 — Splices on 16 mm film projection type

Table 1 — Dimensions of splices for 16 mm motion-picture films

Dimension	Type 1 (Laboratory)*		Type 2 (Projection)	
	mm	in	mm	in
A nom.	1,76	0.070	2,49	0.098
B	15,21 ± 0,05	0.599 ± 0.002	15,24 ± 0,05	0.600 ± 0.002
C	6,47 ± 0,05	0.255 ± 0.002	7,01 ± 0,10	0.276 ± 0.004
D	8,23 ± 0,05	0.324 ± 0.002	9,50 ± 0,10	0.373 ± 0.004

* In single negative printing dimension *C* should be 7,53 ± 0,05 mm (0.296 ± 0.002 in) to minimize the printing of a white line. Dimension *A* becomes 0,70 mm (0.028 in).

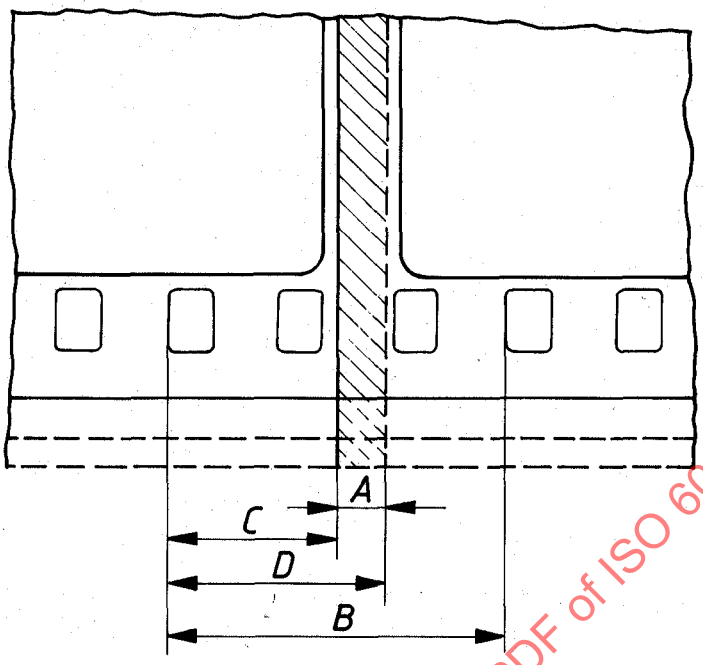

Figure 3 — Splices on 70 mm, 65 mm and 35 mm films

Table 2 — Dimensions of splices for 35 mm motion-picture film

Dimension	Type 1 (Laboratory)**		Type 2 (Projection) (non-anamorphic)		Type 3 (Projection) (anamorphic)*	
	mm	in	mm	in	mm	in
A nom.	1,24	0.049	1,83	0.072	1,24	0.049
B	14,22 ± 0,05	0.560 ± 0.002	14,25 ± 0,05	0.561 ± 0.002	14,25 ± 0,05	0.561 ± 0.002
C	7,42 ± 0,05	0.292 ± 0.002	7,21 ± 0,10	0.284 ± 0.004	7,42 ± 0,05	0.292 ± 0.002
D	8,66 ± 0,05	0.341 ± 0.002	9,04 ± 0,10	0.356 ± 0.004	8,66 ± 0,05	0.341 ± 0.002

* Notice that the Type 3 splices on anamorphic film will fall within the projected area, and extra care should be taken in making a clean splice.

** It is also recommended that dimension *A* be not greater than 1,02 mm (0.040 in) in the anamorphic negative to minimize intrusion of the splice in the projected image area.

Table 3 — Dimensions of splices for 70 mm and 65 mm motion-picture films

Dimension	Type 1 (Laboratory) 65 mm		Type 2 (Projection) 70 mm	
	mm	in	mm	in
A nom.	1,70	0.067	1,70	0.067
B	14,22 ± 0,05	0.560 ± 0.002	14,25 ± 0,05	0.561 ± 0.002
C	7,27 ± 0,05	0.286 ± 0.002	7,27 ± 0,05	0.286 ± 0.002
D	8,97 ± 0,05	0.353 ± 0.002	8,97 ± 0,05	0.353 ± 0.002

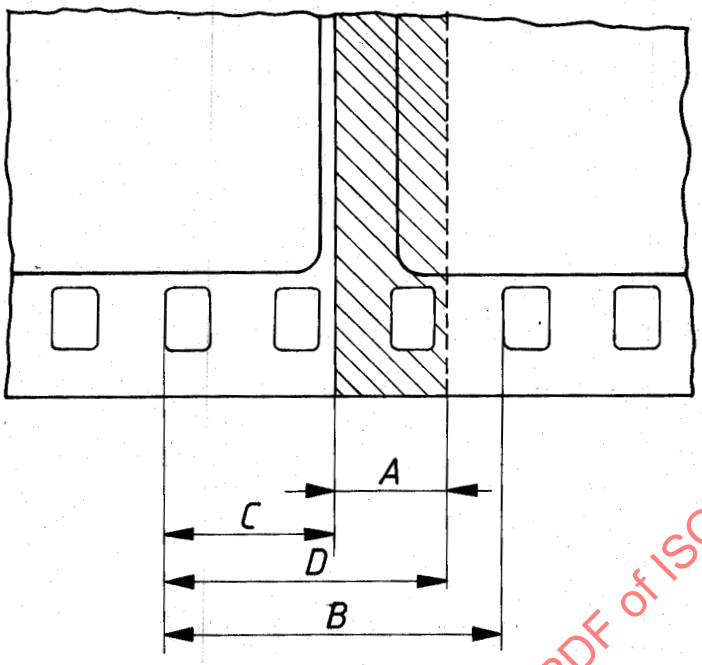

Figure 4 — Full perforation splices on 35 mm projection prints

Table 4 — Dimensions of splices on 35 mm cemented and welded motion-picture projection prints

Dimension	mm	in
A nom.	3,96	0.156
B	14,25 ± 0,05	0.561 ± 0.002
C	8,13 ± 0,05	0.320 ± 0.002
D	12,09 ± 0,05	0.476 ± 0.002

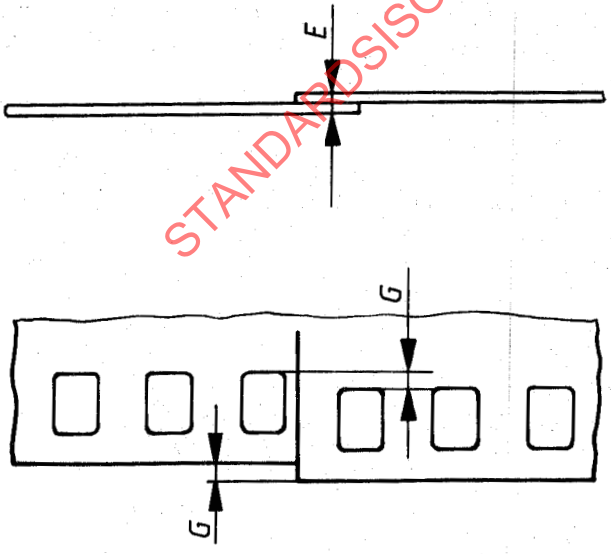

Figure 5 — For all film widths

Table 5 — Dimensions for all splices

Dimension	mm	in
E max.	0,33	0.013
G max.*	0,05	0.002

* A difference in the lateral shrinkages of the two strips may make it impossible to maintain the tolerance. Shoulders formed by such misalignment should be bevelled.

If the film to be spliced contains a photographic sound track, and the modulation level at the point of the splice results in any individual bias line having a width of less than 0,05 mm, then the sound track should be blooped or opaqued to avoid an objectionable audio crash.

NOTES ON BUTT SPLICES

1 Splices with tape on one side only are not functional in projection and are not acceptable.

2 Splices made with tape wrapped around the film interfere with guiding and are not acceptable.