

# Society of Motion Picture and Television Engineers

## JOURNAL                      VOL. 62                      JANUARY 1954                      NO. 1

Arthur C. Downes  
Chairman, Board of Editors

Editor  
Victor H. Allen

William H. Rivers  
Chairman, Papers Committee

Development of Motion-Picture Positive Film by Vanadous Ion . . .		1
A. A. RASCH and J. I. CRABTREE		
A Mathematical Approach to Replenishment Techniques . . . . .		11
SAMUEL R. GOLDWASSER		
The Effect of Camera Exposure on the Tone-Reproduction Quality of Motion Pictures . . . . .	ALLAN L. SOREM	24
New 35mm Television Film Scanner . . . . .	E. H. TRAUB	45
Fast-Cycling Intermittent for 16mm Film . . . . .	WARREN R. ISOM	55
The CinemaScope Optical System . . . . .	JAMES R. BENFORD	64
Stereophonic Tape Recording Equipment . . . . .	RUSSELL J. TINKHAM	71
Stainless-Steel Developing-Machine Rollers . . . . .	A. H. VACHON	75
Use of the 16mm Sound-Service Test Film — SPSA . . . . .		
WILLIAM C. EVERS		77
British Standard 1404:1953 — Screen Luminance (Brightness) for the Projection of 35mm Film . . . . .	W. WALLACE LOZIER	79
Theater Engineering Committee Report . . . . .	BENJAMIN SCHLANGER	82
<b>AMERICAN STANDARDS . . . . .</b>	<b>84</b>	
Dimensions for 16mm Film, Perforated Two Edges, PH22.5- 1953; Dimensions for 16mm Film, Perforated One Edge, PH22.12-1953; Dimensions for 35mm Motion-Picture Short- Pitch Negative Film, PH22.93- 1953.		
American Standards for Still Photography . . . . .	91	
Correction — PH22.11, American Standard 16mm Motion Picture Projection Reels . . . . .	91	
75th Convention and High-Speed Photography . . . . .	92	
Central Section Meetings . . . . .	92	
Pacific Coast Section Meeting . . .	93	
Revised Roster of Atlantic Coast Section Officers . . . . .	93	
BOOK REVIEWS . . . . .	93	
<i>The Technique of Film Editing: Basic Principles for TV</i> , by Karel Reisz, reviewed by Thomas C. Daly; <i>Television</i> , by F. Kerkhof and W. Werner, reviewed by Harry R. Lubcke.		
Association of Cinema Labora- tories . . . . .	95	
New Members . . . . .	96	
New Products . . . . .	98	
Employment Service . . . . .	103	
Meetings . . . . .	104	

Subscription to nonmembers, \$12.50 a year; to members, \$6.25 a year, included in their annual membership dues; single copies, \$1.50. Order from the Society's General Office. A 10% discount is allowed to accredited agencies on orders for subscriptions and single copies. Published monthly at Easton, Pa., by the Society of Motion Picture and Television Engineers, Inc. Publication Office, 20th & Northampton Sts., Easton, Pa. General and Editorial Office, 40 West 40th St., New York 18, N.Y. Entered as second-class matter January 15, 1930, at the Post Office at Easton, Pa., under the Act of March 3, 1879. Copyright, 1954, by the Society of Motion Picture and Television Engineers, Inc. Permission to republish material must be obtained in writing from the General Office of the Society. The Society is not responsible for statements of contributors.