

Entertainment Services and
Technology Association



American National Standard
E1.22 - 2009
Entertainment Technology
Fire Safety Curtain Systems

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[inside front cover]

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American National Standard E1.22 - 2009 Entertainment Technology Fire Safety Curtain Systems

Rig/2002-2032r9.1

This document was approved as an American National Standard by the ANSI Board of Standards Review
on 21 April 2009.

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Published by:

Entertainment Services and Technology Association
875 Sixth Avenue, Suite 1005
New York, NY 10001 USA
Phone: 1-212-244-1505
Fax: 1-212-244-1502
standards@esta.org
<http://www.esta.org/>

For additional copies of this document contact:

ESTA Publications
The ESTA Foundation
875 Sixth Avenue, Suite 1005
New York, NY 10001 USA
Phone: 1-212-244-1505
Fax: 1-212-244-1502
<http://www.estafoundation.org>

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The ESTA Technical Standards Program was created to serve the ESTA membership and the entertainment industry in technical standards related matters. The goal of the Program is to take a leading role regarding technology within the entertainment industry by creating recommended practices and standards, monitoring standards issues around the world on behalf of our members, and improving communications and safety within the industry. ESTA works closely with the technical standards efforts of other organizations within our industry, including USITT, PLASA, and VPLT, as well as representing the interests of ESTA members to ANSI, UL, and the NFPA. The Technical Standards Program is accredited by the American National Standards Institute.

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The Rigging Working Group, which authored this Standard, consists of a cross section of entertainment industry professionals representing a diversity of interests related to rigging and stage machinery for theatrical events. ESTA is committed to developing consensus-based standards and recommended practices in an open setting. Future Rigging Working Group projects will include updating this publication as changes in technology and experience warrant, as well as developing new standards and recommended practices for the benefit of the entertainment industry.

Contact Information

Entertainment Services and Technology Association

Karl G. Ruling
Technical Standards Manager
ESTA
875 Sixth Avenue, Suite 1005
New York, NY 10001
Phone: 1-212-244-1505
FAX: 1-212-244-1502
standards@esta.org

Technical Standards Committee Chairperson

Mike Garl
James Thomas Engineering, Inc.
10240 Caneel Drive
Knoxville, TN 37931
Phone: 1-865-692-3060
FAX: 1-865-692-9020
mikeg@jthomaseng.com

Rigging Working Group Chairpersons

Bill Sapsis
Sapsis Rigging, Inc.
233 North Lansdowne Ave.
Lansdowne, PA 19050
Phone: 1-215-228-0888
FAX: 1-215-228-1786
bill@sapsis-rigging.com

Kent Jorgensen
IATSE Local 80
2520 West Olive
Burbank, CA 91505
Phone: 1-818-526-0701
FAX: 1-818-526-0711
safety@iatselocal80.org

Acknowledgments

The Rigging Working Group was the consensus body for the development of this Standard. The working group's membership at the time the working group approved this standard on 5 January 2009 is listed below:

Principal Voting Members

William Beautyman; Limelight Productions, Inc. [DR]
Ron Bonner; PLASA [G]
William Bradburn; Aerial Arts, Inc. [U]
Vincent J. Cannavale; Motion Laboratories [CP]
Michael J. Carnaby; Mikan Theatricals [DR]
Joseph Champelli; Fisher Technical Services, Inc. [CP]
William Conner; Bill Conner Associates LLC, representing the American Society of Theatre Consultants [U]
Kimberly Corbett; Schuler Shook [G]
Dan Culhane; SECOA [CP]
Bruce Darden; Rigging Innovators, Inc. [CP]
Don Dimitroff; Columbus McKinnon Corp. [MP]
M. Brad Dittmer; Downhome Productions [U]
Adrian Forbes-Black; Total Structures Inc. [MP]
Mike Garl; James Thomas Engineering, Inc. [MP]
Jerry Gorrell; Theatre Safety Programs [G]
Steven Graham; R&M Materials Handling [MP]
Pat Grenfell; Vortek Rigging Division of Daktronics Inc. [CP]
Tim Hansen; Oasis Stage Werks [DR]
Pete Happe; Walt Disney Imagineering [U]
Donald A. Hoffend, Jr.; Avista Designs, LLC [G]
Wendy Holt; Alliance of Motion Picture and Television Producers [G]
Ted Jones; Chicago Spotlight, Inc. [U]
Kent H. Jorgensen; IATSE Local 80 [G]
Christine L. Kaiser; Syracuse Scenery & Stage Lighting Co., Inc. [DR]
Edwin S. Kramer; IATSE Local 1 [U]
Roger Lattin; IATSE Local 728 [U]
Eugene Leitermann; Theatre Projects Consultants, Inc. [G]
Jon Lenard; Applied Electronics [MP]
Reid Neslage; H & H Specialties Inc. [MP]
James Niesel; Arup [G]
Richard J. Nix; Entertainment Structures Group [G]
Rocky Paulson; Stage Rigging, Inc. [DR]
Shawn Sack; Mountain Productions Inc. [DR]
Bill Sapsis; Sapsis Rigging, Inc. [U]
Peter A. Scheu; Scheu Consulting Services [G]
Peter Christian Schmidtke ; Hollywood Lighting Services, Inc. [DR]
Knut Skjonberg; Skjonberg Controls, Inc. [CP]
Stephen G. Surratt; Texas Scenic Company [DR]
Peter V. Svitavsky; J.R. Clancy Inc. [CP]
Harvey Sweet; LA ProPoint, Inc. [DR]
Steve Walker; Steve A. Walker & Associates [G]
Charlie Weiner [U]
Nathan Wells; Stage Technologies [MP]
Jeff Wilkowski; Thern, Inc. [MP]

Alternate Voting Members

Tray Allen; James Thomas Engineering, Inc. [MP]
Dana Bartholomew; Fisher Technical Services [CP]

Spencer Brown; Oasis Stage Werks [DR]
Daniel J. Clark; Entertainment Structures Group [G]
Joshua Grossman; Schuler Shook [G]
Herb Hart; Columbus McKinnon Corp. [MP]
Peter Herrmann; Motion Laboratories [CP]
David Herrmann; Motion Laboratories [CP]
Joe Ingle; R&M Materials Handling [MP]
Rodney F. Kaiser; J.R. Clancy Inc. [CP]
Theresa Kelley; Total Structures Inc. [MP]
Jerald Kraft; SECOA [CP]
Kyle Kusmer; Entertainment Structures Group [G]
Bob Medve; Limelight Productions, Inc. [DR]
Edward A. Paget; Vortek Rigging Division of Daktronics Inc. [CP]
Jeff Reder; Entertainment Structures Group [G]
John Ringelman; Stage Rigging, Inc. [DR]
Monica Skjonberg; Skjonberg Controls, Inc. [CP]
Steve Sweet; Theatre Projects Consultants, Inc. [G]
Elmer Veith; Total Structures, Inc. [MP]
Robert Voss; Vortek Rigging Division of Daktronics Inc. [CP]
Frank Willard; Syracuse Scenery & Stage Lighting Co., Inc. [DR]
R. Duane Wilson; George C. Izenour Associates, representing the American Society of Theatre Consultants [U]
Jake Winkelman; Vortek Rigging Division of Daktronics Inc. [CP]
Thomas S. Young; J.R. Clancy Inc. [CP]

Observer Members (Non-voting)

Warren A. Bacon [U]
Rinus Bakker; Rhino Rigs B.V. [G]
Robert Barbagallo; Solotech Inc. [DR]
Roger Barrett; Star Events Group Ltd. [DR]
F. Robert Bauer; F.R. Bauer & Associates, LLC [G]
Lee J. Bloch; Bloch Design Group, Inc. [G]
Keith Bohn; Tomcat USA, Inc. [MP]
Louis Bradfield [U]
Buddy Braile; Bestek Lighting & Staging [U]
Andre Broucke; ADB - TTV Technologies [MP]
John R. Burgess [U]
David M. Campbell; Geiger Engineers [G]
Ian Coles; Total Structures, Inc. [MP]
Gregory C. Collis; IATSE Local 16 [G]
Olan Cottrill; Staging Productions, Inc. [DR]
Randall W. A. Davidson; Risk International & Associates, Inc. [U]
Robert Dean; ZFX Inc. [CP]
François Deffarges; Nexo [MP]
Cristina Delboni; Feeling Structures [MP]
Michael Dileso; IATSE Local 481 [U]
Harry Donovan; Donovan Rigging, Inc. [G]
Noga Eilon-Bahar; Eilon Engineering Industrial Weighing Systems [MP]
James B. Evans; Mountain Productions Inc. [DR]
Jim Fletcher; American Sling Company, Inc. [MP]
Tim Franklin; Theta-Consulting [G]
Douglas Franz; QVC Network [U]
Jay O. Glerum; Jay O. Glerum & Associates, Inc. [U]
Rand Goddard; W.E. Palmer Co. [CP]
Reuben Goldberg; Technic Services [U]
Charles E. Gorgen [G]

Thomas M. Granucci; Associated Students, Cox Arena, San Diego State University [U]
Robert A. Grenier Jr.; Ocean State Rigging Systems Inc. [DR]
Delbert Hall; Hall Associates Inc. [U]
Dean Hart; Stage Rigging, Inc. [U]
Ben Hayes; Freedom Flying [G]
Marc Hendriks; Prolyte [MP]
Ted Hickey; OAP Audio Products [MP]
Chris Higgs; Total Solutions Group [G]
Wes Jenkins; Down Stage Right Industries [CP]
Peter Johns; Total Structures, Inc. [MP]
Gary Justesen; Oasis Stage Werks [DR]
John Kaes [U]
JoAnna Kamorin-Lloyd; Vincent Lighting Systems [U]
Bradford A. Kegel; National Production Services Inc. [U]
Michael Keppler; Bogen [MP]
Nevin Kleege; Kleege Industries [U]
Jon Lagerquist; South Coast Repertory [U]
Mylan Lester; Creation Logics Ltd. [U]
Michael Lichter; Electronic Theatre Controls GmbH [MP]
Baer Long; Ninja Rigging [G]
Dennis J. Lopez; Automatic Devices Co. [MP]
Chuck McClelland; Jeamar Winches Inc. [MP]
Richard C. Mecke; Texas Scenic Company [DR]
Hank Miller; W.E. Palmer Co. [CP]
Shaun Millington; SEW-Eurodrive, Inc. [MP]
Timothy Mills; Geiger Engineers [G]
Scott Mohr; R&R Cases and Cabinets [G]
Mark Newlin; Texas Scenic Company [DR]
Rikki Newman [U]
Ed Nicholas; Theatrical Lighting Systems, Inc. [DR]
Tracy Nunnally; Northern Illinois University [U]
Howard R. Ott; D.E.O. Associates, Inc. [G]
Michael Patterson; Pook Diemont & Ohl, Inc. [CP]
Todd Petersen; Mixed Productions [U]
G. Anthony Phillips; IATSE Local 16 [U]
Christopher Purpura; Jones & Phillips Associates, Inc. [G]
Joseph Rapier; Parkhill, Smith & Cooper, Inc. [CP]
Michael Reed; Reed Rigging, Inc. [U]
Julie Rogers; City of Phoenix Civic Plaza [G]
Michael L. Savage, Sr.; Middle Dept. Inspection Agency, Inc. [G]
John C. Snook; Thermotex Industries Inc. [CP]
Rob Stevenson; SEW-Eurodrive, Inc. [MP]
Andy Sutton; AFX UK Ltd. [U]
Joachim Stoecker; CAMCO GmbH [MP]
John Van Lennep; Theatrix Inc. [DR]
Michael G. Wiener; Aerial Rigging & Leasing, Inc. [U]
Jiantong Wu; Beijing Special Engineering Design & Research Institute [G]

[CP] Custom-market producer
[MP] Mass-market producer
[DR] Dealer or rental company
[U] User
[G] General interest

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1 General

1.1 Scope

This standard governs the materials, fabrication, installation, operation, testing, and maintenance of fire safety curtain systems used for proscenium opening protection.

1.2 Purpose

1.2.1 Fire safety curtain systems shall be used where required by building codes, fire codes, or by the authority having jurisdiction.

1.2.2 Fire safety curtain systems shall work in conjunction with other building life and fire safety systems.(See Annex note B.1.2.2.)

1.2.3 Fire safety curtain systems shall protect occupants of the audience area from a fire on stage and shall in combination with other building life and fire safety systems provide occupants of the audience area sufficient time for safe and orderly egress.

1.2.4 The fire safety curtain shall reduce the transmission of radiant heat, block debris, and contribute to the control of smoke and gas movement.

1.3 Equivalency

The provisions of this standard are not intended to prevent the use of any material or to prohibit any design or method of fabrication not specifically prescribed by this standard, provided that any such alternative material, design or method of fabrication complies with the intent of the provisions of this standard, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this standard in quality, strength, and effectiveness.

2 Definitions

2.1 Batten: A horizontal pipe, tube, or other structural shape in a pocket of or attached to a fire safety curtain.

2.2 Brail Fire Safety Curtain: An unframed fire safety curtain that is folded horizontally in an accordion fashion for storage.

2.3 Brail Fire Safety Curtain System: A system that opens and closes a brail fire safety curtain.

2.4 Bumper: A filled pocket of fabric located below the bottom batten or bottom member of a frame.

2.5 Fill: The set of yarns placed crosswise in the loom, interlaced with the warp, forming the crosswise threads in the fabric. Also known as cross machine direction.

2.6 Fire Safety Curtain: The actual barrier including the membrane, structural framing, and attached hardware that closes the proscenium opening.

2.7 Fire Safety Curtain System: A fire safety curtain with all required hardware and controls to form a complete, fully operable assembly.(See Annex note B.2.7.)

2.8 Framed Fire Safety Curtain: A curtain with rigid horizontal members in addition to the top and bottom batten connected by two or more rigid vertical members.

2.9 Labeled: Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product