



ESTA Standards Watch

Late February 2017 Volume 21, Number 4

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Public Comment Sought on Reaffirmation of Five ESTA Standards

Five Technical Standards Program standards are newly posted for public comment. These documents are all up for reaffirmation, meaning they have been published for as long as five years and the consensus body is considering republishing them with no substantive changes. Comments on the draft standards will be accepted through the end of the day on 3 April 2017. Download the documents, review instructions, and review forms at http://tsp.esta.org/tsp/documents/public_review_docs.php.

BSR E1.1 - 2012 (R201x), Entertainment Technology—Construction and Use of Wire Rope Ladders

The Rigging Working Group is considering E1.1 - 2012 for reaffirmation. The standard describes the construction and use of wire rope ladders in the entertainment industry in order to promote worker safety. Wire rope ladders are used where ladders with rigid rails are impractical to use or would pose a greater danger.

BSR E1.8 - 2012 (R201x), Entertainment Technology—Loudspeaker Enclosures Intended for Overhead Suspension--Classification, Manufacture and Structural Testing

The Rigging Working Group is considering E1.8 - 2012 for reaffirmation. It is a standard for the structural integrity of loudspeaker enclosures that are suspended overhead. It is designed to ensure that flown speaker enclosures don't break and drop debris. It does not address requirements for sound reproduction.

BSR E1.16 - 2002 (R201x), Entertainment Technology—Configuration Standard for Metal-Halide Ballast Power Cables

The Electrical Power Working Group is considering ANSI E1.16 - 2002 (R2012) for reaffirmation. This standard describes a standard practice for grounding contact assignment for detachable power cables on 6kW, 12kW and 18kW metal-halide lamp ballasts used in the motion picture and television industries on portable studio luminaires that use the MIL-C-5015 connector with #28-6 insert configuration on the ballast end of the power cable.

BSR E1.32 - 2012 (R201x), Guide for the Inspection of Entertainment Industry Incandescent Lamp Luminaires

The Electrical Power Working Group is considering ANSI E1.32 – 2012 for reaffirmation. E1.32 provides guidance in the inspection of stage and studio luminaires that use incandescent sources and that are used in the entertainment industry. The inspection is to evaluate their safety and any needed maintenance. The information contained in this document is intended to supplement the information contained in manufacturers' maintenance instructions.

BSR E1.37-1 - 2012 (R201x), Additional Message Sets for ANSI E1.20 (RDM) – Part 1, Dimmer Message Sets

The Control Protocols Working Group is considering E1.37-1 - 2012, Additional Message Sets for ANSI E1.20 (RDM) – Part 1, for reaffirmation. It provides additional RDM get/set parameter messages (PIDs). Most of the messages in this document are intended for use with entertainment lighting dimming systems. These additional messages allow access to configuration parameters commonly found in many theatrical dimming systems.

ANSI E1.24 and E1.27 Reaffirmed

On Thursday, 23 February 2017, ANSI's Board of Standards Review approved the reaffirmation of **ANSI E1.24 – 2012, Entertainment Technology - Dimensional Requirements for Stage Pin Connectors**, and **ANSI E1.26 – 2006 (R2012), Entertainment Technology - Recommended Testing Methods and Values for Shock Absorption of Floors Used in Live Performance Venues**. The new editions will be published in the next few weeks. Since these are reaffirmations, there will be no substantive changes. Changes will be limited to front matter such as asserting a current copyright date, updating the working group membership lists and "Investors in Innovation" table, and changing the organizational name from PLASA North America to ESTA, the Entertainment Services and Technology Association. When published, they will be available for purchase from ANSI's Webstore at <http://webstore.ansi.org/> and from IHS at <https://global.ihs.com/>. They will also be available for free download from the ESTA website at <http://tsp.esta.org/freestandards>, thanks to the sponsorship of Prosight Specialty Insurance.

ANSI E1.24 is a configuration standard giving the mating requirements for male and female pin connectors, contact set-backs from the front face, and marking requirements. The electrical reliability and flammability requirements for pin connectors are outside the scope of this standard and would be covered by other standards, such as UL 498, Attachment Plugs and Receptacles.

ANSI E1.26 describes a method for measuring how stiff a performance floor is. It also suggests some ranges that have been found to be acceptable—neither too stiff nor too springy.

ANSI Seeks Comments on Consumer Vulnerability

The International Organization for Standardization (ISO) has circulated a proposal, available at <http://estalink.us/7xiru>, for a new ISO standard project to be titled: Guideline for inclusive service - identifying and responding to consumers in vulnerable situations. As the U.S. member body to ISO, the American National Standards Institute invites all interested U.S. stakeholders to submit comments on the proposal by the end of the business day on Friday 7 April 2017. Please submit comments to Steve Cornish, ANSI senior director of international policy (scornish@ansi.org).

The proposal, submitted by ISO's Consumer Policy Committee (COPOLCO), together with BSI, the UK member body to ISO, explains that the new ISO standard would provide guidance to organizations on how to identify consumers in vulnerable situations and how to develop, implement, and maintain policies and procedures for the organization to deal with vulnerable consumers.

An international standard would help organizations minimize consumer detriment by:

- Raising awareness and understanding of consumer vulnerability
- Giving guidance on how to identify consumers in vulnerable circumstances
- Establishing processes and procedures that will help organizations respond to consumers in vulnerable situations in a fair and flexible way

ICC 2018–2019 Code Development Cycle & Call for Committees

The Final Action for the 2016 Group B Cycle, the 2018/2019 Code Development Schedule is now available at <http://cdn-web.iccsafe.org/wp-content/uploads/2018-2019-Code-Development-Schedule.pdf>. In conjunction with the posting of the schedule, a Call for Committee for 2018/2019 Cycle code committees and related cycle committees has been issued. The application deadline for 2018/2019 Cycle related committees is June 1. More information about joining a committee is available at <http://www.iccsafe.org/membership/councils-committees/call-for-councils-and-committees/>.

WTO Technical Barrier to Trade Notifications

The U.S. Department of Commerce's service, Notify U.S., recently has announced WTO Technical Barrier to Trade notices that may be of interest to *Standards Watch* readers. If you have a problem with these notices, you can protest through your representative to the WTO. See "Guidance for Comment Submissions by U.S. Industry on TBT Notifications" at <http://tsapps.nist.gov/notifyus/data/guidance/guidance.cfm> or <http://ec.europa.eu/enterprise/tbt/> for advice on filing objections.

European Union Notification EU/452

Date issued: 10 February 2017

Agency responsible: EU-TBT Enquiry Point

National inquiry point: EU-TBT Enquiry Point

Products covered: Electrical and electronic equipment

Title: Draft Commission Delegated Directive amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for cadmium in colour converting light-emitting diodes (LEDs) for use in display systems (6 pages + Annex 2 pages, in English)

Description of content: This draft Commission Delegated Directive concerns an application specific and temporary exemption from the RoHS 2 (Directive 2011/65/EU) substance restrictions.

Objective and rationale: Adaptation of existing legislation to scientific and technical progress, granting manufacturers adequate transition time for compliance.

Relevant documents: Scientific background studies justifying the specific exemption are available (<http://bookshop.europa.eu/en/assistance-to-the-commission-on-technological-socio-economic-and-cost-benefit-assessment-related-to-exemptions-from-the-substance-restrictions-in-electrical-and-electronic-equipment-pbKH0416553/>).

Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1438768100804&uri=CELEX:32011L0065>

Proposed date of adoption: 1 May 2017

Proposed date of entry into force: Not given by country

Final date for comments: 11 April 2017

Full text: [https://tsapps.nist.gov/notifyus/docs/wto_country/EU/full_text/pdf/EU452\[1\]\(english\).pdf](https://tsapps.nist.gov/notifyus/docs/wto_country/EU/full_text/pdf/EU452[1](english).pdf) and [https://tsapps.nist.gov/notifyus/docs/wto_country/EU/full_text/pdf/EU452\[2\]\(english\).pdf](https://tsapps.nist.gov/notifyus/docs/wto_country/EU/full_text/pdf/EU452[2](english).pdf)

France Notification FRA/171

Date issued: 10 February 2017

Agency responsible: Office of the External Environment and Chemical Products (EA-1)

National inquiry point: Association Française de Normalisation, Centre d'Information sur les Normes et Règlements Techniques (CINORTECH) (AFNOR)

Products covered: Tanning devices (tanning booths/sunbeds)

Title: Projet de décret relatif aux conditions de mise à disposition des appareils de bronzage au public et modifiant le décret n° 2013-1261 du 27 décembre 2013 relatif à la vente et à la mise à disposition du public de certains appareils utilisant des rayonnements ultraviolets (Draft Decree on the public use of tanning devices, which amends Decree No. 2013-1261 of 27 December 2013 on the sale and public use of certain tanning devices using artificial ultraviolet radiation) (8 pages, in French)

Description of content: The notified draft Decree, pursuant to Article 21 of Law 2016-41 of 26 January 2016 on the modernization of the health system, amends the provisions of Decree No. 2013-1261 of 27 December 2013, which was also the subject of a TBT notification on 7 March 2013.

With a view to ensuring the protection and safety of the public, this draft Decree sets out several provisions on technical standards:

- Section II (which amends Article 2 of Decree No. 2013-1261) prohibits the sale of UV3 devices to the public (the sale of UV1 devices has been prohibited since 1997);
- Section X (which amends Article 12 of Decree No. 2013-1261) establishes that a written document must be included with the instruction manual for devices in order to remind professionals of the health risks associated with exposure to artificial ultraviolet radiation;
- Section XI (amending Article 13 of Decree 2013-1261) establishes that oral and written information must be provided prior to use of devices (since 2013, warning messages have been compulsory in public reception areas, next to each device, and on advertisement material);
- Section XV (amending Article 17 of Decree No. 2013-1261) establishes that technical inspections must be carried out when UV emitters are changed, to check the levels of radiation emitted.

Objective and rationale: Since 1997, France has pursued a strategy to reduce the health risks linked to ultraviolet radiation, by regulating artificial tanning practices (Decrees of 1997 and 2013). Studies conducted in the country have shown that UV radiation may be dangerous, regardless of the frequency, exposure or dose received, and as from the first use. According to current knowledge, repeated exposure to artificial UV radiation through the use of tanning devices has more disadvantages than benefits (National Cancer Institute). In 2015, it was estimated that there were 14,325 new cases of cutaneous melanoma (compared with 9780 in 2011) which led to 1773 deaths (compared with 1620 in 2011). These cases have increased over the past five years (see relevant documents). At international level, the International Agency for Research on Cancer (IARC) determined that UV radiation was carcinogenic to humans in July 2009. Moreover, in its report of 17 November 2016 (see relevant documents) the Scientific Committee on Health, Environmental And Emerging Risks (SCHEER) concluded that there is no safe limit for exposure to UV radiation from sunbeds, given the carcinogenic effect of exposure to tanning devices and the nature of the skin cancers induced. However, the public is still insufficiently informed of the risks related to the practice of artificial tanning and many individuals continue to believe that it is beneficial. Less than 50% of individuals interviewed believed that they were well-informed of the cancer risks linked to exposure to artificial rays (see relevant documents). In light of the aforementioned findings, it appears necessary, appropriate and proportionate to strengthen the regulations on artificial tanning and develop consumer information on the health hazards associated with exposure to artificial UV radiation. This is the objective of the notified draft Decree.

Relevant documents: . Article 21 de la loi n°2016-41 du 26 janvier 2016 de modernisation de notre système de santé (Article 21 of Law No. 2016-41 of 26 January 2016 on the modernization of the health system)

- Final opinion on biological effects of ultraviolet radiation relevant to health with particular reference to sunbeds for cosmetic purposes, SCHEER
https://ec.europa.eu/health/sites/health/files/scientific_committees/scheer/docs/scheer_o_003.pdf
- "Les cancers en France - Edition 2015" ("Cancer in France - Edition 2015"), National Cancer Institute, April 2016
- L'exposition aux ultraviolets artificiels en France, Bulletin épidémiologique hebdomadaire, Institut de veille sanitaire (Exposure to Artificial Ultraviolet Radiation, Weekly Epidemiological Bulletin, French Institute for Public Health Surveillance), May 2012

Proposed date of adoption: 1 May 2017

Proposed date of entry into force: 1 July 2017

Final date for comments: 11 April 2017

Full text: [https://tsapps.nist.gov/notifyus/docs/wto_country/FRA/full_text/pdf/FRA171\(english\).pdf](https://tsapps.nist.gov/notifyus/docs/wto_country/FRA/full_text/pdf/FRA171(english).pdf)

ANSI Public Review Announcements

The following documents have been announced for public review by ANSI. Please send your comments before the deadline to the person indicated and to ANSI's Board of Standards Review at psa@ansi.org.

Due 3 April 2017

BSR Z535.6-2011 (R201x), Product Safety Information in Product Manuals, Instructions, and Other Collateral Materials (reaffirmation of ANSI Z535.6 -2011)

This standard sets forth requirements for the design and location of product safety messages in collateral materials for a wide variety of products.

Single copy price: \$115.00

Order from and send comments to: Kevin Connelly, Kevin.Connelly@Nema.org

Due 10 April 2017

BSR/AWS B5.2-201x, Specification for the Training, Qualification, and Company Certification of Welding Inspector Specialists and Welding Inspector Assistants (new standard)

This specification defines the requirements and program for an employer (company) to train, qualify, and company certify Welding Inspector Specialists and Welding Inspector Assistants to contract or industry-specific inspector standards. The program is developed as a written practice and controlled by an employer. The employer is responsible for the testing, examination, and qualification of their inspectors.

Single copy price: \$30.00

Obtain an electronic copy from: steveh@aws.org

Send comments to: aalonso@aws.org

BSR/AWS C3.12M/C3.12-201x, Specification for Furnace Soldering (new standard)

This specification provides the minimum fabrication, equipment, material, process procedure requirements, as well as inspection requirements for metal and ceramic base materials that can be adequately furnace-soldered. This specification provides criteria for classifying furnace-soldered joints based on loading and the consequences of failure. It also provides quality assurance criteria that define the limits of acceptability in each class. This specification describes acceptable furnace soldering equipment, materials, and procedures, as well as the required inspection for each class of solder joint so produced.

Single copy price: \$32.50

Order from and send comments to: John Douglass, jdouglass@aws.org

BSR/AWS C4.3/C4.3M-201X, Recommended Practices for Oxyfuel Gas Heating Torch Operation (revision of ANSI/AWS C4.3/C4.3M-2007)

The newly revised manual for oxyfuel gas heating torch operation includes the latest procedures to be used in conjunction with oxyfuel gas heating equipment. The manual also includes the latest safety requirements. Complete lists of equipment are available from individual manufacturers.

Single copy price: \$24.00

Order from and send comments to: Jennifer Rosario, jrosario@aws.org

BSR/AWS D14.3/D14.3M-201x, Specification for Welding Earthmoving, Construction, Agricultural, and Ground-Based Material Handling Equipment (revision of ANSI/AWS D14.3/D14.3M-2010)

Provides standards for producing structural welds used in the manufacture and repair of earthmoving, construction, agricultural, and ground-based material handling equipment. Such equipment is defined as self-propelled, on- and off-highway machinery and associated implements. Manufacturer's responsibilities are presented as they relate to the welding practices that have been proven successful within the industry in the production of weldments on this equipment. Requirements for basic weld details, base material, filler material, processes, welding procedure qualification and documentation, welding personnel qualification, weld quality, inspection, and repair are included with consideration given to factors that affect weldability.

Single copy price: \$44.00

Obtain an electronic copy from: jdouglass@aws.org

Order from and send comments to: John Douglass, jdouglass@aws.org

BSR/ICEA S-75-381-201x/NEMA WC 58-201x, Portable and Power Feeder Cables for Use in Mines and Similar Applications (revision and redesignation of ANSI ICEA S-75-381-2008/NEMA WC 58-2008)

These standards apply to materials, construction, and testing of insulated cables used for the utilization of electrical energy in surface and underground mines and similar applications. Included are portable cables for use in mining machines, dredges, shovels, and similar equipment, and mine power cables for use as connections between units of mine distribution systems, and remote control and drill cords for mining and similar applications.

Single copy price: \$275.00

Order from and send comments to: Kevin Connelly, Kevin.Connelly@Nema.org

DIN Public Review Announcements

The Deutsches Institut für Normung has announced a draft document possibly of interest to *Standards Watch* readers that will be available for comment from 17 March until 17 May 2017. After you register with DIN at <http://www.entwuerfe.din.de/>, you may purchase and comment on DIN draft standards.

DIN 56955, Veranstaltungstechnik - Lastannahmen für Einbauten in Bühnen und Nebenbereichen - Nutzlasten (Entertainment technology - Load assumptions in stages and associated areas - Imposed loads)

This draft standard applies to permanent and variable loads, as well as their combinations, for technical installations in stages and their adjacent areas, in assembly facilities, and in event and production sites. This draft standard does not apply to mobile platforms and frames complying with the DIN 15920 and DIN 15921, their stairs and railings, as well as grandstands, decorations, and backdrops.

New ANS Projects

ANSI has announced the following new projects that might materially affect *Standards Watch* readers—or at least be interesting to them. Contact the developer if you (a) want to be involved in the project, or (b) object to the project and wish it to be abandoned, or (c) if you would like to point out that its scope is covered by an existing standard, thereby possibly making the project redundant or conflicting.

BSR/AWS B2.1/B2.1M:2014-AMD1-201x, Specification for Welding Procedure and Performance

Qualification (addenda to ANSI/AWS B2.1/B2.1M:2014-AMD1-2015)

This specification provides the requirements for qualification of welding procedure specifications, welders, and welding operators for manual, semiautomatic, mechanized, and automatic welding. The welding processes included are electrogas welding, electron beam welding, electroslog welding, flux-cored arc welding, gas-metal arc welding, gas tungsten arc welding, laser-beam welding, oxyfuel gas welding, plasma-arc welding, shielded-metal arc welding, stud arc welding, and submerged arc welding. Base metals, filler metals, qualification variables, welding designs, and testing requirements are also included.

Contact: Jennifer Rosario, jrosario@aws.org

BSR Z136.6-201x, Standard for Safe Use of Lasers Outdoors (revision of ANSI Z136.6-2015)

This standard provides guidance for the safe use of potentially hazardous lasers and laser systems in an outdoor environment. It also provides guidance for controlling disability glare from exposure to noninjurious levels of visible laser light, and guidance for the manufacturers of these openbeam laser systems.

Contact: Barbara Sams, bsams@lia.org

BSR/AWS C1.4M/C1.4-201x, Specification for Resistance Welding of Carbon and Low-Alloy Steels

(revision of ANSI/AWS C1.4M/C1.4 -2017)

This specification provides the shear strength and weld button diameter requirements for carbon steel and low-alloy steel sheet resistance and projection welds.

Contact: Annik Babinski, ababinski@aws.org

BSR/AWS J1.1M/J1.1-201x, Specification for Resistance Welding Controls (revision and redesignation of ANSI/AWS J1.1/J1.1M-2013)

This standard provides nomenclature pertaining to the design, construction, and programming of resistance welding controls. Standard calibration and performance parameters, as well as labeling and documentation requirements, are also outlined. The purpose is to promote standardization, safety, and proper application of resistance welding controls.

Contact: Annik Babinski, ababinski@aws.org

Final Actions on American National Standards

The documents listed below have been approved by the ANSI Board of Standards Review or by an ANSI-Audited Designator on the date noted.

ANSI/ASHRAE Addendum d to ANSI/ASHRAE Standard 188-2015, Legionellosis: Risk Management for Building Water Systems (addenda to ANSI/ASHRAE Standard 188-2015): 2 February 2017

ANSI/ASHRAE Standard 120-2017, Method of Testing to Determine Flow Resistance of HVAC Ducts and Fittings (revision of ANSI/ASHRAE Standard 120-2008): 1 February 2017

Draft IEC & ISO Standards

This section lists proposed standards that the International Electromechanical Commission (IEC) or the International Organization for Standardization (ISO) are considering for approval. *Standards Watch* readers interested in reviewing and commenting on the document should order a copy from their national representative and submit their comments through them. Comments from US citizens on IEC documents should be sent to Charles T. Zegers at czegers@ansi.org. Comments from US citizens regarding ISO documents should be sent to Karen Hughes at isot@ansi.org. Any prices, if shown, are for purchases through ANSI; prices elsewhere may differ. The sort order is first by due date then by alphanumeric designation.

ISO/DIS 21012, Cryogenic vessels - Hoses – 2 March 2017, \$67.00

ISO/DIS 20140-2, Automation systems and integration – Evaluating energy efficiency and other factors of manufacturing systems that influence the environment - Part 2: Environmental performance evaluation process – 4 March 2017, \$58.00

ISO/IEC DIS 24748-1, Systems and software engineering - Life cycle management - Part 1: Guidelines for life cycle management – 9 March 2017, \$134.00

56/1727/CD, IEC/ISO 31010 ED2: Risk management - Risk assessment techniques, 28 April 2017

ISO/DIS 28862, Packaging - Child-resistant packaging – Requirements and testing procedures for non-reclosable packages for nonpharmaceutical products – 30 April 2017, \$62.00

ISO/DIS 16696-1, Timber structures - Cross laminated timber - Part 1: Component performance and production requirements – 10 May 2017, \$82.00

ISO/DIS 17607, Steel structures - Execution of structural steelwork -10 May 2017, \$203.00

ISO/DIS 17677-1, Resistance welding - Vocabulary - Part 1: Spot, projection and seam welding – 10 May 2017, \$98.00

Recently Published IEC & ISO Documents

Listed here are documents recently approved by the IEC and ISO. A list of standards resellers is available at <http://webstore.ansi.org/faq.aspx#resellers>.

ISO 20421-2:2017, Cryogenic vessels - Large transportable vacuum insulated vessels - Part 2: Operational requirements, \$103.00

ISO 22514-2:2017, Statistical methods in process management -Capability and performance - Part 2: Process capability and performance of time-dependent process models, \$138.00

IEC 60974-1 Ed. 5.0 b:2017, Arc welding equipment - Part 1: Welding power sources, \$387.00

IEC 62606 Ed. 1.1 b:2017, General requirements for arc fault detection devices, \$645.00

IEC 62606 Amd.1 Ed. 1.0 b:2017, Amendment 1 – General requirements for arc fault detection devices, \$117.00

TSP Meeting Schedule

The March meetings will be at the Marriott St. Louis Grand in conjunction with the USITT Conference and Stage Expo. The most up to date schedule can be found on the ESTA website at <http://tsp.esta.org/tsp/meetings/index.php>.

Control Protocols BSR E1.37-7 (gateway/splitter) TG	13:00 – 18:00	Saturday 11 March 2017
Control Protocols E1.31 IPv6 revision	19:00 – 23:00	Thursday 9 March 2017
Control Protocols E1.33 RDMnet	10:00 – 18:00	Friday 10 March 2017
Control Protocols E1.59 Automation Feedback TG	09:00 – 13:00	Thursday 9 March 2017
Control Protocols Working Group	13:00 – 17:00	Thursday 9 March 2017
Electrical Power Working Group	09:00 – noon	Thursday 9 March 2017
Event Safety Fire Safety TG	09:00 – 13:00	Saturday 11 March 2017
Event Safety Task Group	14:00 – 18:00	Thursday 9 March 2017
Event Safety Working Group	noon – 16:00	Saturday 11 March 2017
Floors Working Group	08:00 – 11:00	Friday 10 March 2017
Fog & Smoke Working Group	19:00 – 23:00	Wednesday 8 March 2017
Followspot Position Working Group	14:30 – 15:00 ESTA Booth 2129	Friday 10 March 2017
Rigging E1.6-2 Task Group	19:00 – 23:00	Wednesday 8 March 2017
Rigging E1.56 Task Group	09:00 – 13:00	Thursday 9 March 2017
Rigging Working Group	18:00 – 20:00	Thursday 9 March 2017
Technical Standards Council	14:00 – 18:00	Wednesday 8 March 2017

Investors in Innovation, supporters of ESTA's Technical Standards Program

VISIONARY LEADERS (\$50,000 & up)

ETC

ProSight Specialty Insurance

VISIONARY (\$10,000 & up; >100 employees/members)

Chauvet Professional
Columbus McKinnon Entertainment Technology
Martin Professional

Robe
United States Institute for Theatre Technology
VER

VISIONARY (\$5,000 & up; 20–100 employees/members)

Altman Lighting, Inc.
German Light Products
High End Systems
JR Clancy

McLaren Engineering Group
Stage Rigging
Tyler Truss Systems, Inc.

VISIONARY (\$500 & up; <20 employees/members)

B-Hive Industries, Inc.
Scott Blair
Boston Illumination group
Candela Controls Inc.
Clark Reder Engineering
Tracey Cosgrove & Mark McKinney
Doug Fleenor Design
EGI Event Production Services
Entertainment Project Services
Neil Huff
Hughston Engineering Inc.
Jules Lauve
Brian Lawlor
Limelight Productions, Inc.

John T. McGraw
Mike Garl Consulting
Mike Wood Consulting
Reed Rigging
Reliable Design Services
Alan Rowe
Sapsis Rigging Inc.
Dana Taylor
Steve Terry
Theatre Projects
Theatre Safety Programs
Tobins Lake Sales Theatrical Supply
Vertigo
Steve A. Walker & Associates

INVESTOR (\$3,000–\$9,999; >100 employees/members)

Barbizon Electric
Golden Sea Professional Equipment Limited
IATSE Local 891
Lex

NAMM
Rosco Laboratories
Texas Scenic Company

INVESTOR (\$1,500–\$4,999; 20–100 employees/members)

American Society of Theatre Consultants
City Theatrical Inc.
InterAmerica Stage, Inc.

Niscon Inc.
Syracuse Scenery and Stage Lighting
XSF Xtreme Structures and Fabrication

INVESTOR (\$200–\$499; <20 employees/members)

Benjamin Cohen
Tony Giovannetti
Indianapolis Stage Sales & Rentals, Inc.
Jason Kyle
Eric Loader
LuciTag

Lumenradio AB
Nudelta Digital
Project SSSHH Incorporated
Stageworks
Stephen Vanciel

SUPPORTER (<\$3,000; >100 employees/members)

Ian Foulds, IATSE Local 873
Harlequin Floors

IATSE Local 80
PSAV

SUPPORTER (<\$1,500; 20–100 employees/members)

Aerial Arts
Blizzard Lighting, LLC
Creative Stage Lighting
Geiger Engineers
H&H Specialties
High Output
InCord

Oasis Stage Werks
Stage Equipment & Lighting
Stagemaker
TMB
Total Structures
Vincent Lighting Systems

SUPPORTER (<\$200; <20 employees/members)

About the Stage
Milton Davis
Pat Grenfell
Mitch Hefter
Alan Hendrickson
Hoist Sales and Services
Beverly and Tom Inglesby
Intensity Advisors
Eddie Kramer
Michael Lay
John Musarra
Shawn Nolan

Lizz Pittsley
Phil Reilly
Robert Scales
Charles Scott
Serapid
Michael Skinner
Skjonberg Controls Inc.
John Szewczuk
Teclumen
Theta Consulting
Tracy Underhill
Ken Vannice

TSP Donors Who Have Made Long-Term, Multi-Year Pledges

About the Stage
Altman Lighting
Barbizon
B-Hive Industries
Scott Blair
Boston Illumination Group
Candela Controls
Chauvet
City Theatrical
Clark-Reder Engineering
Columbus McKinnon Corporation
Tracey Cosgrove and Mark
McKinney
Doug Fleenor Design
Earl Girls Inc. EGI Pro
Electronic Theatre Controls
Entertainment Project Services
Tony Giovannetti
GLP German Light Products
Golden Sea Professional Equipment
Limited
H & H Specialties

Harlequin Floors
High End Systems
High Output
Neil Huff
Hughston Engineering
IATSE Local 891
InCord
Beverly and Tom Inglesby
Interactive Technologies
InterAmerica Stage
J.R. Clancy
Jules Lauve
Brian Lawlor
Lex Products
Lycian Stage Lighting
John T. McGraw
McLaren Engineering Group
Mike Garl Consulting
Mike Wood Consulting
NAMM
Niscon
Oasis Stage Werks
Reed Rigging

Reliable Design Services
Robe
Rosco Laboratories
Alan M. Rowe
Sapsis Rigging
Stage Equipment & Lighting
Stage Rigging
Stagemaker
Syracuse Scenery and Stage
Lighting, Co. Inc.
Dana Taylor
Steve Terry
Texas Scenic Company
Theatre Projects Consultants
Theatre Safety Programs
Tyler Truss Systems
VER
Vertigo
Vincent Lighting Systems
Steve Walker & Associates
XSF Xtreme Structures and
Fabrication

ESTA Standards Watch

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Editors:

Karl G. Ruling, Technical Standards Manager
Entertainment Services and Technology Association
630 Ninth Avenue, Suite 609
New York, NY 10036
USA
karl.ruling@esta.org
1 212 244 1505 ext. 703
Fax 1 212 244 1502

Erin Grabe, Asst. Technical Standards Manager
Entertainment Services and Technology Association
630 Ninth Avenue, Suite 609
New York, NY 10036
USA
erin.grabe@esta.org
1 212 244 1505 ext. 606
Fax 1 212 244 1502