ANSI STANDARDS ACTION

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Contents

American National Standards

Call for comment on proposals listed

This section solicits public comments on proposed draft new American National Standards, including the national adoption of ISO and IEC standards as American National Standards, and on proposals to revise, reaffirm or withdraw approval of existing American National Standards. A draft standard is listed in this section under the ANSI-accredited standards developer (ASD) that sponsors it and from whom a copy may be obtained. Comments in connection with a draft American National Standard must be submitted in writing to the ASD no later than the last day of the comment period specified herein. Such comments shall be specific to the section(s) of the standard under review and include sufficient detail so as to enable the reader to understand the commenter's position, concerns and suggested alternative language, if appropriate. Please note that the ANSI Executive Standards Council (ExSC) has determined that an ASD has the right to require that interested parties submit public review comments electronically, in accordance with the developer's procedures.

Ordering Instructions for "Call-for-Comment" Listings

1. **Order from the organization indicated for the specific proposal.**
2. **Use the full identification in your order, including the BSR prefix; for example, Electric Fuses BSR/SAE J554.**
3. **Include remittance with all orders.**
4. **BSR proposals will not be available after the deadline of call for comment.**

Comments should be addressed to the organization indicated, with a copy to the Board of Standards Review, American National Standards Institute, 25 West 43rd Street, New York, NY 10036. Fax: 212-840-2298; e-mail: psa@ansi.org

* Standard for consumer products

ISSN 0038-9633

Comment Deadline: November 20, 2011

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE Addendum 15b-201x, Safety Standard for Refrigeration Systems (addenda to ANSI/ASHRAE Standard 15-2010)

Clarifies the location requirements for machinery room mechanical ventilation.

Click here to see these changes in full, or look at the end of "Standards Action."

Send comments (with copy to BSR) to: Online Comment Database at www.ashrae.org/publicreviews

BSR/ASHRAE Addendum 15c-201x, Safety Standard for Refrigeration Systems (addenda to ANSI/ASHRAE Standard 15-2010)

Clarifies that design pressure is expressed in terms of relative pressure or gauge pressure (not absolute pressure).

Click here to see these changes in full, or look at the end of "Standards Action."

Send comments (with copy to BSR) to: Online Comment Database at www.ashrae.org/publicreviews

BSR/ASHRAE Addendum 15d-201x, Safety Standard for Refrigeration Systems (addenda to ANSI/ASHRAE Standard 15-2010)

More closely harmonizes Standard 15 with the 2012 International Mechanical Code (IMC) section 1101.10 regarding refrigerant access.

Click here to see these changes in full, or look at the end of "Standards Action."

Send comments (with copy to BSR) to: Online Comment Database at www.ashrae.org/publicreviews

BSR/ASHRAE Addendum 15e-201x, Safety Standard for Refrigeration Systems (addenda to ANSI/ASHRAE Standard 15-2010)

Removes an obsolete Appendix from Standard 15, pertaining to calculating allowable concentration for refrigerant blends.

Click here to see these changes in full, or look at the end of "Standards Action."

Send comments (with copy to BSR) to: Online Comment Database at www.ashrae.org/publicreviews

BSR/ASHRAE Addendum 15f-201x, Safety Standard for Refrigeration Systems (addenda to ANSI/ASHRAE Standard 15-2010)

Removes obsolete information regarding manual emergency discharge of ammonia refrigerant.

Click here to see these changes in full, or look at the end of "Standards Action."

Send comments (with copy to BSR) to: Online Comment Database at www.ashrae.org/publicreviews

ASME (American Society of Mechanical Engineers)

Revisions

BSR/ASME B16.18-201x, Cast Copper Alloy Solder Joint Pressure Fittings (revision of ANSI/ASME B16.18-2001 (R2005))

Establishes requirements for:
(a) pressure-temperature ratings;
(b) abbreviations for end connections;
(c) sizes and method of designating openings of fittings;
(d) marking;
(e) material;
(f) dimensions and tolerances; and
(g) tests.

Click here to see these changes in full, or look at the end of "Standards Action."

Send comments (with copy to BSR) to: Colleen O'Brien, (212) 591-7881, obrienc@asme.org

NSF (NSF International)

Revisions

* BSR/NSF 332-201x (i5), Sustainability Assessment for Resilient Flooring (revision of ANSI/NSF 332-2010)

Issue 5 - Adds language to Sections 9.3.5 and 9.3.6, Prerequisites - Prohibition on Forced and Child Labor, regarding countries where this is prohibited by law.

Click here to see these changes in full, or look at the end of "Standards Action."

Send comments (with copy to BSR) to: Mindy Costello, (734) 827-6819, mcostello@nsf.org

* BSR/NSF 332-201x (i6), Sustainability Assessment for Resilient Flooring (revision of ANSI/NSF 332-2010)

Issue 6 - Adds language in section 6.4.2, Reduced Water Consumption.

Click here to see these changes in full, or look at the end of "Standards Action."

Send comments (with copy to BSR) to: Mindy Costello, (734) 827-6819, mcostello@nsf.org

PRCA (Professional Ropes Course Association)

New Standards

BSR/PRCA 1.0-3-201x, Ropes Challenge Course Installation, Operation, and Training Standards (new standard)

Establishes safety requirements for the design, manufacture, performance, construction, inspection, maintenance, removal from service, qualification, instruction, training, use and operation of components, subsystems, systems, and courses utilized by the ropes challenge course industry, including permanent, temporary, or mobile portable or fixed low ropes challenge course elements, high ropes challenge course elements, stand-alone challenge elements, zip lines, canopy tours, adventure courses, and any climbing walls and climbing structures that are components of a ropes challenge course.

Click here to see these changes in full, or look at the end of "Standards Action."

Send comments (with copy to BSR) to: info@prcainfo.org (Required comment forms can be downloaded at http://www.prcainfo.org)

UL (Underwriters Laboratories, Inc.)

Revisions

* BSR/UL 325-201x, Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems (revision of ANSI/UL 325-2010)

Revises standard to require the same level of evaluation for Types B1 and B2 devices when used as the primary or secondary entrapment protection for gate operators.

Click here to see these changes in full, or look at the end of "Standards Action."

Send comments (with copy to BSR) to: Amy Walker, (847) 664-2023, Amy.K.Walker@us.ul.com

BSR/UL 498A-201x, Standard for Safety for Current Taps and Adapters (revision of ANSI/UL 498A-2009)

Covers:
(1) Addition of requirements for a current tap with an integral power supply with one or more Class 2 output low-voltage connectors;
(4) Addition of requirements for outdoor-use current taps; and
(5) Addition of requirements for current taps employing rotatable outlet faces.

Click here to see these changes in full, or look at the end of "Standards Action."

Send comments (with copy to BSR) to: Patricia Sena, (919) 549-1636, patricia.a.sena@us.ul.com

BSR/UL 541-201x, Standard for Safety for Refrigerated Vending Machines (revision of ANSI/UL 541-2010)

Proposes editorial revisions.

Click here to see these changes in full, or look at the end of "Standards Action."

Send comments (with copy to BSR) to: Beth Northcott, (847) 664-3198, Elizabeth.Northcott@us.ul.com

BSR/UL 840-201x, Standard for Safety for Insulation Coordination Including Clearances and Creepage Distances for Electrical Equipment (revision of ANSI/UL 840 -2007)

The following changes in requirements to UL 840 are being recirculated: Surge protective devices used in electrical equipment.

Click here to see these changes in full, or look at the end of "Standards Action."

Send comments (with copy to BSR) to: Raymond Suga, (631) 546-2593, Raymond.M.Suga@us.ul.com

BSR/UL 1063-201x, Standard for Safety for Machine-Tool Wires and Cables (revision of ANSI/UL 1063-2006)

Covers:
(1) Miscellaneous editorial corrections;
(2) Revision of Table 6.12 to reflect available sizes of 19-wire combination round-wire unilay-stranded copper conductors;
(3) Specification of oil for the Oil Immersion Test;
(4) Expansion of shielding requirements to permit the use of a shield over an assembly of conductors;
(5) Clarification of the dielectric-withstand test in air at rated temperature; and
(6) Addition of test temperatures to the Long Time in Water Insulation Resistance Tests.

Click here to see these changes in full, or look at the end of "Standards Action."

Send comments (with copy to BSR) to: Camille Alma, (631) 271-6200, Camille.A.Alma@us.ul.com

BSR/UL 1569-201x, Standard for Safety for Metal-Clad Cables (revision of ANSI/UL 1569-2011)

Covers:
(1) Yellow identification of grounded conductors in multiple neutral MC cables; and
(2) Removal of aluminum from aluminum interlocked armor in 6.1.5A.

Click here to see these changes in full, or look at the end of "Standards Action."

Send comments (with copy to BSR) to: Camille Alma, (631) 271-6200, Camille.A.Alma@us.ul.com

Comment Deadline: December 5, 2011

3-A (3-A Sanitary Standards, Inc.)

Revisions

BSR/3-A P3-A 003-201x, Standard for Centrifugal Pumps for Use in the Manufacture of Active Pharmaceutical Ingredients (revision of ANSI/3-A P3-A 003-2008)

Covers the sanitary design requirements of mechanically sealed end-suction centrifugal pumps conforming to ANSI/ASME B73.1, pertinent to active pharmaceutical ingredient (API) manufacturing in order to maintain product integrity.

Single copy price: $85.00 (nonmembers)/$45.00 (3-A members)

Obtain an electronic copy from: trugh@3-a.org

Order from: Timothy Rugh, (703) 790-0295, trugh@3-A.org

Send comments (with copy to BSR) to: Same

AAMI (Association for the Advancement of Medical Instrumentation)

Reaffirmations

BSR/AAMI/ISO 11140-3-2007 (R201x), Sterilization of health care products - Chemical indicators - Part 3: Class 2 indicator systems for use in the Bowie and Dick-type steam penetration test (reaffirmation of ANSI/AAMI/ISO 11140-3-2007)

Specifies the requirements for chemical indicators to be used in the steam penetration test for steam sterilizers for wrapped goods, e.g., instruments and porous materials. The indicator for this purpose is a Class 2 indicator as described in ISO 11140-1.

Single copy price: $45.00 (AAMI members)/$90.00 (list) (print/PDF)

Obtain an electronic copy from: www.aami.org

Order from: AAMI Publications; PHONE: 1-877-249-8226; FAX: 1-301 -206-9789

Send comments (with copy to BSR) to: Cliff Bernier, AAMI; cbernier@aami.org

BSR/AAMI/ISO 11140-4-2007 (R201x), Sterilization of health care products - Chemical indicators - Part 4: Class 2 indicators as an alternative to the Bowie and Dick-type test for detection of steam penetration (reaffirmation of ANSI/AAMI/ISO 11140-4-2007)

Specifies performance for a Class 2 indicator to be used as an alternative to the Bowie and Dick test for steam sterilizers for wrapped health care goods (instruments, etc. and porous loads).

Single copy price: $50.00 (AAMI members)/$100.00 (list) (print/PDF)

Obtain an electronic copy from: www.aami.org

Order from: AAMI Publications; PHONE: 1-877-249-8226; FAX: 1-301 -206-9789

Send comments (with copy to BSR) to: Cliff Bernier, AAMI; cbernier@aami.org

BSR/AAMI/ISO 11140-5-2007 (R201x), Sterilization of health care products - Chemical indicators - Part 5: Class 2 indicators for Bowie and Dick-type air removal tests (reaffirmation of ANSI/AAMI/ISO 11140-5-2007)

Specifies requirements for an indicator and alternative test system used to evaluate the effectiveness of air removal during the pre-vacuum phase of pre-vacuum steam sterilization cycles.

Single copy price: $45.00 (AAMI members)/$90.00 (list) (print/PDF)

Obtain an electronic copy from: www.aami.org

Order from: AAMI Publications; PHONE: 1-877-249-8226; FAX: 1-301 -206-9789

Send comments (with copy to BSR) to: Cliff Bernier, AAMI; cbernier@aami.org

APA (APA - The Engineered Wood Association)

New Standards

* BSR/APA PRG 320-201x, Standard for Performance-Rated Cross-Laminated Timber (new standard)

Covers the manufacturing, qualification, quality assurance, design, and installation requirements for engineered wood cross-laminated timber products.

Single copy price: Free

Obtain an electronic copy from: borjen.yeh@apawood.org

Order from: Borjen Yeh, (253) 620-7467, borjen.yeh@apawood.org

Send comments (with copy to BSR) to: Same

ASME (American Society of Mechanical Engineers)

Revisions

BSR/ASME CSD-1-201x, Controls and Safety Devices for Automatically Fired Boilers (revision of ANSI/ASME CSD-1-2009)

Covers requirements for the assembly, installation, maintenance, and operation of controls and safety devices on automatically operated boilers directly fired with gas, oil, gas-oil, or electricity within the service limitations and exclusions found in this Standard.

Single copy price: Free

Obtain an electronic copy from: http://cstools.asme.org/publicreview

Order from: Mayra Santiago, ASME; ANSIBOX@asme.org

Send comments (with copy to BSR) to: Gerardo Moino, (212) 591-8460, moinog@asme.org

BSR/ASME PVHO-1-201x, Safety Standard for Pressure Vessels for Human Occupancy (revision of ANSI/ASME PVHO-1-2007)

Applies to all pressure vessels that enclose a human within its pressure boundary while under internal or external pressure exceeding a differential pressure of 2 psi. PVHOs include, but are not limited to, submersibles; diving bells; personnel transfer capsules; and decompression, recompression, hypobaric, and hyperbaric PVHOs.

Single copy price: Free

Obtain an electronic copy from: http://cstools.asme.org/publicreview

Order from: Mayra Santiago, ASME; ANSIBOX@asme.org

Send comments (with copy to BSR) to: Gerardo Moino, (212) 591-8460, moinog@asme.org

CSA (CSA America, Inc.)

Revisions

* BSR Z21.15a-201x, Standard for Manually Operated Gas Valves for Appliances, Appliance Connector Valves and Hose End Valves (same as CSA 9.1a) (revision of ANSI Z21.15-2009)

Details test and examination criteria for manually operated gas valves, not exceeding 4 inches (102 mm) pipe size, and pilot shut-off devices, except for hose-end valves and appliance connector valves, intended to be used as part of a gas-fired appliance.

Single copy price: $50.00

Obtain an electronic copy from: cathy.rake@csa-america.org

Order from: Cathy Rake, (216) 524-4990, cathy.rake@csa-america.org

Send comments (with copy to BSR) to: Same

* BSR Z21.69a-201x, Standard for Connectors for Movable Gas Appliances (same as CSA 6.16a) (revision of ANSI Z21.69-2008)

Details test and examination criteria for gas appliance connectors consisting of flexible tubing for connecting gas supply piping to a gas appliance mounted on casters or otherwise subject to movement. These connectors are limited to a maximum length of 6 feet (1.83 m). These connectors are suitable for use with natural, manufactured or mixed gases, liquefied petroleum gases, or LP gas-air mixtures, at pressures not in excess of 1/2 psi (3.5 kPa).

Single copy price: $50.00

Obtain an electronic copy from: cathy.rake@csa-america.org

Order from: Cathy Rake, (216) 524-4990, cathy.rake@csa-america.org

Send comments (with copy to BSR) to: Same

* BSR Z21.90-201x, Standard for Gas Convenience Outlets and Optional Enclosures (same as CSA 6.24) (revision of ANSI Z21.90-2001 (R2011), ANSI Z21.90a-2003, and ANSI Z21.90b-2006)

Details test and examination criteria for gas convenience outlets and optional enclosures, capable of operation at ambient temperatures between 32 F and 200 F (0 C and 93.3 C) if intended for Indoor Use Only, or between -20 F and 200 F (-28.8 C and 93.3 C), if intended for Indoor/Outdoor Use, and at pressures not in excess of 5 psig (34.5 kPa).

Single copy price: $50.00

Obtain an electronic copy from: cathy.rake@csa-america.org

Order from: Cathy Rake, (216) 524-4990, cathy.rake@csa-america.org

Send comments (with copy to BSR) to: Same

Reaffirmations

* BSR Z21.47-2006 (R201x); BSR Z21.47a-2007 (R201x); BSR Z21.47b -2008 (R201x), Standard for Gas-Fired Central Furnaces (same as CSA 2.3) (reaffirmation of ANSI Z21.47-2006, ANSI Z21.47a-2007, and ANSI Z21.47b-2008)

Applies to automatically operating gas-fired central furnaces for installation in residential, commercial, and industrial structures including furnaces for Direct Vent, Recreational Vehicle, Outdoor, and Manufactured (Mobile) Homes. These furnaces may include a cooling unit.

Single copy price: $175.00

Obtain an electronic copy from: cathy.rake@csa-america.org

Order from: Cathy Rake, (216) 524-4990, cathy.rake@csa-america.org

Send comments (with copy to BSR) to: Same

GTEEMC (Georgia Tech Energy and Environmental Management Center)

New Standards

BSR/GTEEMC MSE 50021-201x, Superior Energy Performance - Additional Requirements for Energy Management Systems (new standard)

Specifies the additional Superior Energy Performance (SEP) requirements beyond the ISO 50001 requirements that are needed for SEP certification. Additional SEP requirements are primarily related to both energy management and energy performance and include performance achievement requirements.

Single copy price: N/A

Obtain an electronic copy from: moon.kim@gtri.gatech.edu

Order from: Moon Kim, 404-558-5948, moon.kim@gtri.gatech.edu

Send comments (with copy to BSR) to: Same

ISA (ISA)

Reaffirmations

BSR/ISA 67.04.01-2006 (R201x), Setpoints for Nuclear Safety-Related Instrumentation (reaffirmation of ANSI/ISA 67.04.01-2006)

Defines the requirements for assessing, establishing, and maintaining nuclear safety-related and other important instrument setpoints associated with nuclear power plants or nuclear reactor facilities. The scope includes instrumentation-based setpoints that assure compliance to one or more design limits.

Single copy price: Free

Obtain an electronic copy from: http://www.isa.org/standards/ansireview

Send comments (with copy to BSR) to: Ellen Fussell Policastro, (919) 990-9227, efussell@isa.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

New Standards

BSR INCITS 483-201x, Information technology - Virtualization Management Specification (new standard)

Describes an open, secure, portable, efficient, and extensible infrastructure for management of virtualized systems.

Single copy price: $30.00

Obtain an electronic copy from: http://www.incits.org or http://webstore.ansi.org

Order from: Global Engineering Documents, (800) 854-7179, www.global.ihs.com

Send comments (with copy to BSR) to: Deborah Spittle, (202) 626-5746, dspittle@itic.org

NAHBRC (NAHB Research Center, Inc.)

Reaffirmations

BSR Z765-2003 (R201x), Square Footage - Method For Calculating (reaffirmation of ANSI Z765-2003)

Describes the procedures to be followed in measuring and calculating the square footage of detached and attached single-family houses.

Single copy price: $20.00 (paper)/$10.00 (electronic)

Obtain an electronic copy from: http://www.nahbrc.com/technical/standards/sqft2012.aspx

Order from: Thomas Kenney, (301) 430-6246, squarefoot@nahbrc.com

Send comments (with copy to BSR) to: squarefoot@nahbrc.com

UL (Underwriters Laboratories, Inc.)

Revisions

* BSR/UL 299-201x, Standard for Safety for Dry Chemical Fire Extinguishers (Proposal dated 10/21/11) (revision of ANSI/UL 299 CAN/ULC-S504-2009)

Clarifies the cylinder requirements with DOT and TDRG specifications.

Single copy price: Contact comm2000 for pricing and delivery options

Obtain an electronic copy from: http://www.comm-2000.com

Order from: comm2000

Send comments (with copy to BSR) to: Betty McKay, (919) 549-1896, betty.c.mckay@us.ul.com

* BSR/UL 474-201x, Standard for Safety for Dehumidfiers (revision of ANSI/UL 474-2009)

Adds a supplement SA for requirements for low-frequency radio pulse non-movable dehumidifiers without a hermetic refrigerant motor-compressor.

Single copy price: Contact comm2000 for pricing and delivery options

Obtain an electronic copy from: http://www.comm-2000.com

Order from: comm2000

Send comments (with copy to BSR) to: Jeffrey Prusko, (847) 664-3416, jeffrey.prusko@us.ul.com

* BSR/UL 626-201x, Standard for Safety for Water Fire Extinguishers (Proposals dated 10/21/11) (revision of ANSI/UL 626 CAN/ULC-S507 -2007)

Clarifies the cylinder requirements with DOT and TDGR specifications and deletes the Carbide Precipitation Test.

Single copy price: Contact comm2000 for pricing and delivery options

Obtain an electronic copy from: http://www.comm-2000.com

Order from: comm2000

Send comments (with copy to BSR) to: Betty McKay, (919) 549-1896, betty.c.mckay@us.ul.com

BSR/UL 1449-201x, Standard for Safety for Surge Protective Devices (revision of ANSI/UL 1449-2010)

Covers:
(1) Disparity between UL 1449 and UL 96A Type 1 SPD ratings;
(2) Creepage and clearange distances based on pollution degree;
(3) Clarification of test procedure in paragraph 37.7.1;
(4) Section 59C, Metal Oxide Varistor DC Leakage Current;
(5) Black box proposal;
(6) Receptacle and circuit breaker enclosures;
(7) 15A Rated devices;
(8) Functioning temperature:
(9) Supplementary protection;
(10) Application and measurement points;
(11) Discrete component varistors;
(12) Revisions to testing;
(13) Open lead during testing;
(14) Addition of protective device;
(15) Non-metallic faceplates;
(16) Limited current abnormal overvoltage test;
(17) Editorial corrections; and
(18) Lead size for current test.

Single copy price: Contact comm2000 for pricing and delivery options

Obtain an electronic copy from: http://www.comm-2000.com

Order from: comm2000

Send comments (with copy to BSR) to: Mitchell Gold, (847) 664-2850, Mitchell.Gold@us.ul.com

* BSR/UL 2129-201x, Standard for Safety for Halocarbon Clean Agent Fire Extinguishers (Proposal dated 10/21/11) (revision of ANSI/UL 2129 CAN/ULC-S566-2007)

Clarifies cylinder requirements with DOT and TDGR specifications.

Single copy price: Contact comm2000 for pricing and delivery options

Obtain an electronic copy from: http://www.comm-2000.com

Order from: comm2000

Send comments (with copy to BSR) to: Betty McKay, (919) 549-1896, betty.c.mckay@us.ul.com

* BSR/UL 60745-2-5-201x, Standard for Safety for Hand-Held Motor-Operated Electrical Tools - Safety - Part 2-5: Particular Requirements for Circular Saws (revision of ANSI/UL 60745-2-5-2008)

Adopts the fifth edition of IEC 60745-2-5, Hand-Held Motor-Operated Electrical Tools - Safety - Part 2-5: Particular Requirements for Circular Saws, as the fifth edition of UL 60745-2-5. The following changes are included:
(A) Modifications to the IEC Text: Changes to endurance and mechanical requirements for guards and clarification of working stand requirements; and
(B) Addition of national differences to add marking requirements for warning and danger statements and to specify that the requirements for working stands do not apply.

Single copy price: Contact comm2000 for pricing and delivery options

Obtain an electronic copy from: http://www.comm-2000.com

Order from: comm2000

Send comments (with copy to BSR) to: Beth Northcott, (847) 664-3198, Elizabeth.Northcott@us.ul.com

Comment Deadline: December 20, 2011

Reaffirmations and withdrawals available electronically may be accessed at: webstore.ansi.org

ASME (American Society of Mechanical Engineers)

Reaffirmations

BSR/ASME PCC 3-2007 (R201x), Inspection Planning Using Risk Based Methods (reaffirmation of ANSI/ASME PCC-3-2007)

The risk analysis principles, guidance and implementation strategies presented in this standard are broadly applicable; however, this standard has been specifically developed for applications involving fixed pressure-containing equipment and components. This standard provides guidance to owners, operators, and designers of pressure-containing equipment for developing and implementing an inspection program.

Single copy price: Free

Order from: For Reaffirmations and Withdrawn standards, please view our catalog at http://www.asme.org/kb/standards

Send comments (with copy to BSR) to: Thomas Schellens, (212) 591-8077, schellenst@asme.org

Technical Reports Registered with ANSI

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Immediately following the end of a 30-day announcement period in Standards Action, the Technical Report will be registered by ANSI. Please submit any comments regarding this registration to the organization indicated, with a copy to the PSA Center, American National Standards Institute, 25 West 43rd Street, New York, NY 10036 or E-Mail to psa@ansi.org.

Comment Deadline: November 20, 2011

NPES (ASC CGATS) (Association for Suppliers of Printing, Publishing and Converting Technologies)

BSR CGATS TR 015-2011, Graphic technology - Methodology for Establishing Printing Aims Based on a Shared Near-Neutral Gray-Scale (TECHNICAL REPORT) (technical report)

Describes and quantifies a methodology for establishing individual printing tone reproduction and near-neutral gray-scale aims, and families thereof, based on a shared near-neutral gray-scale definition.

Single copy price: $20.00

Order from: Debra Orf, (703) 264-7200, dorf@npes.org

Send comments (with copy to BSR) to: Same

30 Day Notice of Withdrawal: ANS 5 to 10 years past approval date

ANSI/AWS B2.1-1-210-2001, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding with Consumable Inserts of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, INMs-1 and ER70S-2, As-Welded or PWHT Condition, Primarily Pipe Applications

ANSI/AWS B2.1-1-211-2001, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding with Consumable Inserts Followed by Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S -1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, INMs-1, ER70S-2, and E7018, As-Welded or PWHT Condition, Primarily Pipe Applications

ANSI/AWS B2.1-8-212:2001, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding of Austenitic Stainless Steel (M -8/P-8/S-8, Group), 1/8 through 1-1/2 inch Thick ERXX, As-Welded Condition, Primarily Pipe Applications

ANSI/AWS B2.1-8-214:2001, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group), 1/8 through 1-1/2 Inch Thick ER3XX, E3XX-XX, As-Welded Condition, Primarily Pipe Applications

ANSI/AWS B2.1-8-215:2001, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding, with Consumable Insert of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1) 1/8 through 1-1/2 Inch Thick IN3XX and ER3XX, As-Welded Condition

ANSI/AWS B2.1-8-216:2001, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding, with Consumable Insert Followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1) 1/8 through 1-1/2 inch Thick IN3XX, ER3XX, and E3XX-XX, As-Welded Condition

Notice of Withdrawn ANS by an ANSI-Accredited Standards Developer

In accordance with clause 4.2.1.3.2 Withdrawal by ANSI-Accredited Standards Developer of the ANSI Essential Requirements, the following American National Standards have been withdrawn as an ANS.

ANSI/ESD SP 5.4-2004 (R2008), Standard Practice for the Protection of Electrostatic Discharge Susceptible Items - Latch-Up Sensitivity Testing of CMOS/BiCMOS Integrated Circuits - Transient Latch-Up Testing - Component Level Supply Transient Stimulation

Call for Members (ANS Consensus Bodies)

Directly and materially affected parties who are interested in participating as a member of an ANS consensus body for the standards listed below are requested to contact the sponsoring standards developer directly and in a timely manner.

3-A (3-A Sanitary Standards, Inc.)

Office: 6888 Elm Street, Suite 2D
McLean, VA 22101-3829

Contact: *Timothy Rugh*

Phone: (703) 790-0295
Fax: (703) 761-6284
E-mail: trugh@3-A.org

BSR/3-A P3-A 003-201x, Standard for Centrifugal Pumps for Use in the Manufacture of Active Pharmaceutical Ingredients (revision of ANSI/3-A P3-A 003-2008)

AAMI (Association for the Advancement of Medical Instrumentation)

Office: 4301 N Fairfax Drive
Suite 301
Arlington, VA 22203-1633

Contact: *Cliff Bernier*

Phone: (703) 253-8263
Fax: (703) 276-0793
E-mail: CBernier@aami.org

BSR/AAMI/ISO 11140-3-2007 (R201x), Sterilization of health care products - Chemical indicators - Part 3: Class 2 indicator systems for use in the Bowie and Dick-type steam penetration test (reaffirmation of ANSI/AAMI/ISO 11140-3-2007)

BSR/AAMI/ISO 11140-4-2007 (R201x), Sterilization of health care products - Chemical indicators - Part 4: Class 2 indicators as an alternative to the Bowie and Dick-type test for detection of steam penetration (reaffirmation of ANSI/AAMI/ISO 11140-4-2007)

BSR/AAMI/ISO 11140-5-2007 (R201x), Sterilization of health care products - Chemical indicators - Part 5: Class 2 indicators for Bowie and Dick-type air removal tests (reaffirmation of ANSI/AAMI/ISO 11140-5-2007)

ITI (INCITS) (InterNational Committee for Information Technology Standards)

Office: 1101 K Street NW, Suite 610
Washington, DC 20005-3922

Contact: *Deborah Spittle*

Phone: (202) 626-5746
Fax: (202) 638-4922
E-mail: dspittle@itic.org

BSR INCITS 483-201x, Information technology - Virtualization Management Specification (new standard)

TIA (Telecommunications Industry Association)

Office: 2500 Wilson Blvd.
Suite 300
Arlington, VA 22201

Contact: *Teesha Jenkins*

Phone: (703) 907-7706
Fax: (703) 907-7727
E-mail: standards@tiaonline.org

BSR/TIA 41.000-E-9-201x, Mobile Application Part (MAP) Introduction (addenda to ANSI/TIA 41.000-E-2004)

Final actions on American National Standards

The standards actions listed below have been approved by the ANSI Board of Standards Review (BSR) or by an ANSI-Audited Designator, as applicable.

ASTM (ASTM International)

Reaffirmations

ANSI/ASTM F2261-2006 (R2011), Test Method for Pressure Rating Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40 and 80 Socket-Type (reaffirmation of ANSI/ASTM F2261-2006): 10/1/2011

Revisions

ANSI/ASTM D3262-2011, Specification for "Fiberglass" Glass-Fiber Reinforced Thermosetting-Resin Sewer Pipe (revision of ANSI/ASTM D3262-2006): 9/20/2011

ANSI/ASTM D3517-2011, Specification for "Fiberglass" Glass-Fiber Reinforced Thermosetting-Resin Pressure Pipe (revision of ANSI/ASTM D3517-2006): 9/20/2011

ANSI/ASTM D3679-2011, Specification for Rigid Poly(Vinyl Chloride) (PVC) Siding (revision of ANSI/ASTM D3679-2009): 9/20/2011

ANSI/ASTM D3754-2011, Specification for "Fiberglass" Glass-Fiber Reinforced Thermosetting-Resin Sewer and Industrial Pressure Pipe (revision of ANSI/ASTM D3754-2006): 9/20/2011

ANSI/ASTM D4226-2011, Test Methods for Impact Resistance of Rigid Poly(Vinyl Chloride) (PVC) Building Products (revision of ANSI/ASTM D4226-2010): 9/20/2011

Withdrawals

ANSI/ASTM D686-1996, Test Methods of Qualitative Examination of Mineral Filler and Mineral Coating of Paper (withdrawal of ANSI/ASTM D686-1996 (R2007)): 10/1/2011

ANSI/ASTM D727-1996, Test Method for Kerosine Number of Roofing and Flooring Felt by the Vacuum Method (withdrawal of ANSI/ASTM D727-1996 (R2001)): 10/1/2011

ANSI/ASTM D1030-1999, Test Method for Fiber Analysis of Paper and Paperboard (withdrawal of ANSI/ASTM D1030-1999): 10/1/2011

ANSI/ASTM D5626-1994, Test Methods for U.S. Postal Service Optical Measurements for Small Areas (withdrawal of ANSI/ASTM D5626-1994 (R2001)): 10/1/2011

HL7 (Health Level Seven)

Reaffirmations

ANSI/HL7 V3 MFRI, R1-2006 (R2011), HL7 Version 3 Standard: Master File/Registry Infrastructure, Release 1 (reaffirmation of ANSI/HL7 V3 MFRI, R1-2006): 10/12/2011

HPS (ASC N13) (Health Physics Society)

New Standards

ANSI N2.1-2011, Radiation Symbol (new standard): 10/17/2011

ANSI N13.41-2011, Criteria for Performing Multiple Dosimetry (new standard): 10/17/2011

ISA (ISA)

Reaffirmations

ANSI/ISA 77.42.01-1999 (R2011), Fossil Fuel Power Plant Feedwater Control System - Drum Type (reaffirmation of ANSI/ISA 77.42.01 -1999 (R2006)): 10/13/2011

ISEA (International Safety Equipment Association)

Revisions

ANSI/ISEA 207-2011, High-Visibility Public Safety Vests (revision of ANSI/ISEA 207-2006): 10/17/2011

ITI (INCITS) (InterNational Committee for Information Technology Standards)

New Standards

ANSI INCITS 481-2011, Information technology - Fibre Channel Protocol for SCSI - 4 (FCP-4) (new standard): 10/12/2011

NCPDP (National Council for Prescription Drug Programs)

New Standards

ANSI/NCPDP RDS Standard v1.0-2011, NCPDP Retiree Drug Subsidy Standard Implementation Guide v1.0 (new standard): 10/17/2011

ANSI/Uniform Healthcare Payer Data Standard v1.0-2011, NCPDP Uniform Healthcare Payer Data Standard Implementation Guide v1.0 (new standard): 10/17/2011

Revisions

ANSI/NCPDP Post Adj v3.0-2011, NCPDP Post Adjudication Standard Implementation Guide v3.0 (revision and redesignation of ANSI/NCPDP Post Adj v2.3-2010): 10/17/2011

ANSI/NCPDP TC vD.8-2011, NCPDP Telecommunication Standard vD.8 (revision and redesignation of ANSI/NCPDP TC vD.6-2011): 10/17/2011

NPES (ASC B65) (Association for Suppliers of Printing, Publishing and Converting Technologies)

Reaffirmations

ANSI/NAPIM 177.2-2006 (R2011), Safety standard - Printing ink vertical post mixers (reaffirmation of ANSI NAPIM 177.2-2006): 10/17/2011

SCTE (Society of Cable Telecommunications Engineers)

Revisions

ANSI/SCTE 14-2011, Test Method for Hex Crimp Tool Verification/Calibration (revision of ANSI/SCTE 14-2007): 10/12/2011

ANSI/SCTE 115-2011, Test Method for Reverse Path (Upstream) Intermodulation Using Two Carriers (revision of ANSI/SCTE 115 -2006): 10/12/2011

TIA (Telecommunications Industry Association)

Addenda

ANSI/TIA 568-C.1-2-2011, Commercial Building Telecommunications Cabling Standard - Addendum 2: General Updates (addenda to ANSI/TIA 568-C.1-2009): 10/17/2011

Reaffirmations

ANSI/TIA 1062-2006 (R2011), 1544 kbps Interface Requirements for Packet-Based Gateways (reaffirmation of ANSI/TIA 1062-2006): 10/17/2011

UL (Underwriters Laboratories, Inc.)

New Standards

ANSI/UL 2580-2011, Batteries for Use in Electric Vehicles (new standard): 10/13/2011

ANSI/UL 2580-2011a, Batteries for Use in Electric Vehicles (new standard): 10/13/2011

Reaffirmations

ANSI/UL 1472-2006 (R2011), Standard for Safety for Solid-State Dimming Controls (reaffirmation of ANSI/UL 1472-2006): 10/14/2011

Revisions

* ANSI/UL 325-2011, Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems (revision of ANSI/UL 325-2010): 10/13/2011

* ANSI/UL 325-2011a, Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems (revision of ANSI/UL 325-2010): 10/13/2011

* ANSI/UL 325-2011b, Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems (revision of ANSI/UL 325-2010): 10/13/2011

* ANSI/UL 325-2011c, Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems (revision of ANSI/UL 325-2010): 10/13/2011

ANSI/UL 710B-2011, Standard for Recirculating Systems (revision of ANSI/UL 710B-2009): 9/2/2011

ANSI/UL 1059-2011, Standard for Safety for Terminal Blocks (revision of ANSI/UL 1059-2010): 10/14/2011

ANSI/UL 1559-2011b, Standard for Safety for Insect-Control Equipment - Electrocution Type (revision of ANSI/UL 1559-2011a): 10/10/2011

ANSI/UL 1990-2011, Standard for Safety for Nonmetallic Underground Conduit with Conductors, UL 1990 (Proposal dated 6/17/11) (revision of ANSI/UL 1990-2007): 10/6/2011

ANSI/UL 1995-2011, Standard of Safety for Heating and Cooling Equipment (revision of ANSI/UL 1995-2009): 10/14/2011

ANSI/UL 1995-2011a, Standard of Safety for Heating and Cooling Equipment (revision of ANSI/UL 1995-2009): 10/14/2011

ANSI/UL 2523-2011, Standard for Safety for Solid Fuel-Fired Hydronic Heating Appliances, Water Heaters and Boilers (revision of ANSI/UL 2523-2009): 10/17/2011

Project Initiation Notification System (PINS)

ANSI Procedures require notification of ANSI by ANSI-accredited standards developers (ASD) of the initiation and scope of activities expected to result in new or revised American National Standards (ANS). Early notification of activity intended to reaffirm or withdraw an ANS and in some instances a PINS related to a national adoption is optional. The mechanism by which such notification is given is referred to as the PINS process. For additional information, see clause 2.4 of the ANSI Essential Requirements: Due Process Requirements for American National Standards.

Following is a list of proposed actions and new ANS that have been received recently from ASDs. Please also review the section in Standards Action entitled "American National Standards Maintained Under Continuous Maintenance" for additional or comparable information with regard to standards maintained under the continuous maintenance option. To view information about additional standards for which a PINS has been submitted and to search approved ANS, please visit www.NSSN.org, which is a database of standards information. Note that this database is not exhaustive.

Directly and materially affected interests wishing to receive more information or to submit comments are requested to contact the standards developer directly within 30 days of the publication of this announcement.

CSA (CSA America, Inc.)

Office: 8501 E. Pleasant Valley Rd.
Cleveland, OH 44131

Contact: *Cathy Rake*

Fax: (216) 520-8979

E-mail: cathy.rake@csa-america.org

BSR Z83.7b-201x, Standard for Gas-Fired Construction Heaters (same as CSA 2.14b) (revision of ANSI Z83.7-2000 (R2010))

Stakeholders: Consumers, manufacturers, gas suppliers, and certifying agencies.

Project Need: To revise this Standard for Safety.

Details test and examination criteria for construction heaters for use with natural and liquefied petroleum gases. A construction heater is primarily intended for temporary use in heating buildings or structures under construction, alteration or repair. All products of combustion are released into the area being heated.

TIA (Telecommunications Industry Association)

Office: 2500 Wilson Blvd.
Suite 300
Arlington, VA 22201

Contact: *Teesha Jenkins*

Fax: (703) 907-7727

E-mail: standards@tiaonline.org

BSR/TIA 41.000-E-9-201x, Mobile Application Part (MAP) Introduction (addenda to ANSI/TIA 41.000-E-2004)

Stakeholders: Wireless telecommunications.

Project Need: To provide updates for an existing standard.

Adds SystemMyTypeCode values in part 550.

UL (Underwriters Laboratories, Inc.)

Office: 333 Pfingsten Road
Northbrook, IL 60062-2096

Contact: *Susan Malohn*

Fax: (847) 407-1725

E-mail: Susan.P.Malohn@us.ul.com

BSR/UL 62109-1-201x, Standard for safety of power converters for use in photovoltaic power systems - Part 1: General requirements (national adoption with modifications of IEC 62109-1)

Stakeholders: UL and manufacturers.

Project Need: To provide the national adoption of an International Standard.

Covers the minimum requirements for the design and manufacture of power conversion equipment (PCE) for protection against electric shock, energy, fire, mechanical, and other hazards. This standard provides general requirements applicable to all types of PV PCE. This standard covers PCE connected to systems not exceeding maximum PV source circuit voltage of 1 500 V d.c.

BSR/UL 62109-2-201x, Standard for safety of power converters for use in photovoltaic power systems - Part 2: Particular requirements for inverters (national adoption with modifications of IEC 62109-2)

Stakeholders: UL and manufacturers.

Project Need: To provide the national adoption of an International Standard.

Covers the particular safety requirements relevant to d.c. to a.c. inverter products as well as products that have or perform inverter functions in addition to other functions, where the inverter is intended for use in PV power systems. Inverters covered by this standard may be grid-interactive, stand-alone, or multiple mode inverters, may be supplied by single or multiple photovoltaic modules grouped in various array configurations, and may be intended for use in conjunction with batteries or other forms of energy storage.

American National Standards Maintained Under Continuous Maintenance

The ANSI Essential Requirements: Due Process Requirements for American National Standards provide two options for the maintenance of American National Standards (ANS): periodic maintenance (see clause 4.7.1) and continuous maintenance (see clause 4.7.2). Continuous maintenance is defined as follows:

The standard shall be maintained by an accredited standards developer. A documented program for periodic publication of revisions shall be established by the standards developer. Processing of these revisions shall be in accordance with these procedures. The published standard shall include a clear statement of the intent to consider requests for change and information on the submittal of such requests. Procedures shall be established for timely, documented consensus action on each request for change and no portion of the standard shall be excluded from the revision process. In the event that no revisions are issued for a period of four years, action to reaffirm or withdraw the standard shall be taken in accordance with the procedures contained in the ANSI Essential Requirements.

The Executive Standards Council (ExSC) has determined that for standards maintained under the Continuous Maintenance option, separate PINS announcements are not required. The following ANSI Accredited Standards Developers have formally registered standards under the Continuous Maintenance option.

- AAMI (Association for the Advancement of Medical Instrumentation)
- AAMVA (American Association of Motor Vehicle Administrators)
- AGA (American Gas Association)
- AGRSS, Inc. (Automotive Glass Replacement Safety Standards Committee, Inc.)
- ASC X9 (Accredited Standards Committee X9, Incorporated)
- ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)
- ASME (American Society of Mechanical Engineers)
- ASTM (ASTM International)
- GEIA (Greenguard Environmental Institute)
- HL7 (Health Level Seven)
- MHI (ASC MH10) (Material Handling Industry)
- NAHBRC (NAHB Research Center, Inc.)
- NBBPVI (National Board of Boiler and Pressure Vessel Inspectors)
- NCPDP (National Council for Prescription Drug Programs)
- NISO (National Information Standards Organization)
- NSF (NSF International)
- TIA (Telecommunications Industry Association)
- UL (Underwriters Laboratories, Inc.)

To obtain additional information with regard to these standards, such as contact information at the ANSI accredited standards developer, please visit ANSI Online at www.ansi.org, select Internet Resources, click on "Standards Information," and see "American National Standards Maintained Under Continuous Maintenance". This information is also available directly at www.ansi.org/publicreview.

Alternatively, you may contact the Procedures & Standards Administration Department (PSA) at psa@ansi.org or via fax at 212-840-2298. If you request that information be provided via E-mail, please include your E-mail address; if you request that information be provided via fax, please include your fax number. Thank you.

ANSI-Accredited Standards Developers Contact Information

The addresses listed in this section are to be used in conjunction with standards listed in PINS, Call for Comment and Final Actions. This section is a list of developers who have submitted standards for this issue of *Standards Action* – it is not intended to be a list of all ANSI-Accredited Standards Developers. Please send all address corrections to Standards Action Editor at standact@ansi.org.

3-A
3-A Sanitary Standards, Inc.

6888 Elm Street, Suite 2D
McLean, VA 22101-3829
Phone: (703) 790-0295
Fax: (703) 761-6284
Web: www.3-a.org

AAMI
Association for the Advancement of Medical Instrumentation (AAMI)

4301 N Fairfax Drive
Suite 301
Arlington, VA 22203-1633
Phone: (703) 253-8263
Fax: (703) 276-0793
Web: www.aami.org

APA
APA - The Engineered Wood Association

7011 South 19th Street
Tacoma, WA 98466
Phone: (253) 620-7467
Fax: (253) 565-7265
Web: www.apawood.org

ASHRAE
American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.

1791 Tullie Cir NE
Atlanta, GA 30043
Phone: (678) 539-1209
Fax: (678) 539-2209
Web: www.ashrae.org

ASME
American Society of Mechanical Engineers

3 Park Avenue, 20th Floor (20N2)
New York, NY 10016
Phone: (212) 591-8521
Fax: (212) 591-8501
Web: www.asme.org

ASTM
ASTM International

100 Barr Harbor Drive
West Conshohocken, PA 19428-2959
Phone: (610) 832-9743
Fax: (610) 834-3655
Web: www.astm.org

CSA
CSA America, Inc.

8501 E. Pleasant Valley Rd.
Cleveland, OH 44131
Phone: (216) 524-4990
Fax: (216) 520-8979
Web: www.csa-america.org

GTEEMC
Georgia Tech Energy and Environmental Management Center

75 Fifth St., N.W. Suite 300
Atlanta, GA 30332-0640
Phone: 404-558-5948
Fax: 404-894-8194
Web: innovate.gatech.edu/

HL7
Health Level Seven

3300 Washtenaw Avenue
Suite 227
Ann Arbor, MI 48104
Phone: (734) 677-7777 Ext 104
Fax: (734) 677-6622
Web: www.hl7.org

HPS (ASC N13)
Health Physics Society

1313 Dolley Madison Blvd, Suite 402
McLean, VA 22101
Phone: (703) 790-1745
Fax: (703) 790-2672
Web: www.hps.orghpspublications/standards.html

ISA (Organization)
ISA-The Instrumentation, Systems, and Automation Society

67 Alexander Drive
Research Triangle Park, NC 27709
Phone: (919) 990-9227
Fax: (919) 549-8288
Web: www.isa.org

ISEA
International Safety Equipment Association

1901 North Moore Street, Suite 808
Arlington, VA 22209
Phone: (703) 525-1695
Fax: (703) 528-2148
Web: www.safetyequipment.org

ITI (INCITS)
InterNational Committee for Information Technology Standards

1101 K Street NW, Suite 610
Washington, DC 20005
Phone: (202) 626-5743
Fax: (202) 638-4922
Web: www.incits.org

NAHBRC
NAHB Research Center, Inc.

400 Prince George's Boulevard
Upper Marlboro, MD 20774
Phone: (301) 430-6246
Fax: (301) 430-6180
Web: www.nahbrc.org

NCPDP
National Council for Prescription Drug Programs

9240 East Raintree Drive
Scottsdale, AZ 85260
Phone: (512) 291-1356
Fax: (480) 767-1042
Web: www.ncpdp.org

NPES (ASC CGATS)
NPES

1899 Preston White Drive
Reston, VA 20191
Phone: (703) 264-7200
Fax: (703) 620-0994
Web: www.npes.org

NSF
NSF International

789 N. Dixboro Road
Ann Arbor, MI 48105
Phone: (734) 827-6819
Fax: (734) 827-7875
Web: www.nsf.org

PRCA
Professional Ropes Course Association

6260 East Riverside Boulevard #104
Rockford, IL 61114
Phone: (815) 986-7776
Fax: (815) 637-2964
Web: www.prcainfo.org

SCTE
Society of Cable Telecommunications Engineers

140 Philips Rd.
Exton, PA 19341
Phone: (610) 594-7308
Fax: (610) 363-5898
Web: www.scte.org

TIA
Telecommunications Industry Association

2500 Wilson Blvd.
Suite 300
Arlington, VA 22201
Phone: (703) 907-7706
Fax: (703) 907-7727
Web: www.tiaonline.org

UL
Underwriters Laboratories, Inc.

333 Pfingsten Road
Northbrook, IL 60062
Phone: (847) 664-2881
Fax: (847) 313-2881
Web: www.ul.com/

ISO Draft International Standards

This section lists proposed standards that the International Organization for Standardization (ISO) is considering for approval. The proposals have received substantial support within the technical committees or subcommittees that developed them and are now being circulated to ISO members for comment and vote. Standards Action readers interested in reviewing and commenting on these documents should order copies from ANSI.

Comments

Comments regarding ISO documents should be sent to Karen Hughes, at ANSI's New York offices (isot@ansi.org). The final date for offering comments is listed after each draft.

Ordering Instructions

ISO Drafts can be made available by contacting ANSI's Customer Service department. Please e-mail your request for an ISO Draft to Customer Service at sales@ansi.org. When making your request, please provide the date of the Standards Action issue in which the draft document you are requesting appears.

AGRICULTURAL FOOD PRODUCTS (TC 34)

ISO/DIS 13484, Foodstuffs - General requirements for molecular biology analysis for detection and identification of destructive organisms in plants and derived products - 1/10/2012, $71.00

ISO/DIS 17180, Animal feeding stuffs - Determination of lysine, methionine and threonine in commercial amino acid products and premixtures - 1/13/2012, $53.00

AIR QUALITY (TC 146)

ISO/DIS 16911-1, Stationary source emissions - Determination of velocity and volume flow rate in ducts - Part 1: Manual reference method - 1/13/2012, $134.00

ISO/DIS 16911-2, Stationary source emissions - Determination of velocity and volume flow rate in ducts - Part 2: Automated measuring systems - 1/13/2012, $112.00

INDUSTRIAL AUTOMATION SYSTEMS AND INTEGRATION (TC 184)

ISO/DIS 14306, Industrial automation systems and integration - JT file format specification for 3D visualization - 1/14/2012, $281.00

MATERIALS, EQUIPMENT AND OFFSHORE STRUCTURES FOR PETROLEUM AND NATURAL GAS INDUSTRIES (TC 67)

ISO/DIS 13628-14, Petroleum and natural gas industries - Design and operation of subsea production systems - Part 14: Subsea high integrity pressure protection systems (HIPPS) - 1/13/2012, $107.00

MECHANICAL VIBRATION AND SHOCK (TC 108)

ISO/DIS 21940-21, Mechanical vibration - Rotor balancing - Part 21: Description and evaluation of balancing machines - 1/13/2012, $125.00

OPTICS AND OPTICAL INSTRUMENTS (TC 172)

ISO/DIS 22665, Ophthalmic optics and instruments - Instruments to measure axial distances in the eye - 1/13/2012, $46.00

ISO/DIS 8980-3, Ophthalmic optics - Uncut finished spectacle lenses - Part 3: Transmittance specifications and test methods - 1/13/2012, $98.00

ISO/DIS 9211-4, Optics and photonics - Optical coatings - Part 4: Specific test methods - 1/10/2012, $62.00

PAPER, BOARD AND PULPS (TC 6)

ISO/DIS 6588-1, Paper, board and pulps - Determination of pH of aqueous extracts - Part 1: Cold extraction - 1/10/2012, $46.00

ISO/DIS 6588-2, Paper, board and pulps - Determination of pH of aqueous extracts - Part 2: Hot extraction - 1/9/2011, $46.00

SOCIETAL SECURITY (TC 223)

ISO/DIS 22311, Societal security - Video-surveillance - Export interoperability - 1/10/2012, $88.00

SOIL QUALITY (TC 190)

ISO/DIS 17380, Soil quality - Determination of total cyanide and easily liberatable cyanide - Continuous-flow analysis method - 1/13/2012, $67.00

SURFACE CHEMICAL ANALYSIS (TC 201)

ISO/DIS 11952, Surface chemical analysis - Scanning probe microscopy - Determination of geometric quantities using SPM: Calibration of measuring systems - 1/13/2012, $119.00

TOBACCO AND TOBACCO PRODUCTS (TC 126)

ISO/DIS 13110, Cigarettes - Determination of menthol in smoke condensates - Gas-chromatographic method - 1/11/2012, $46.00

Newly Published ISO & IEC Standards

Listed here are new and revised standards recently approved and promulgated by ISO - the International Organization for Standardization – and IEC – the International Electrotechnical Commission. Most are available at the ANSI Electronic Standards Store (ESS) at www.ansi.org. All paper copies are available from Standards resellers (http://webstore.ansi.org/faq.aspx#resellers)..

ISO Standards

AGRICULTURAL FOOD PRODUCTS (TC 34)

ISO 3972:2011, Sensory analysis - Methodology - Method of investigating sensitivity of taste, $65.00

AIR QUALITY (TC 146)

ISO 16000-3:2011, Indoor air - Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air - Active sampling method, $116.00

AIRCRAFT AND SPACE VEHICLES (TC 20)

ISO 15889:2011, Space data and information transfer systems - The data description language EAST specification, $206.00

ANAESTHETIC AND RESPIRATORY EQUIPMENT (TC 121)

ISO 80601-2-12/Cor1:2011, Medical electrical equipment - Part 2-12: Particular requirements for basic safety and essential performance of critical care ventilators - Corrigendum 1, FREE

CORROSION OF METALS AND ALLOYS (TC 156)

ISO 7539-6:2011, Corrosion of metals and alloys - Stress corrosion testing - Part 6: Preparation and use of precracked specimens for tests under constant load or constant displacement, $135.00

GEOGRAPHIC INFORMATION/GEOMATICS (TC 211)

ISO 19118:2011, Geographic information - Encoding, $167.00

MECHANICAL TESTING OF METALS (TC 164)

ISO 26203-2:2011, Metallic materials - Tensile testing at high strain rates - Part 2: Servo-hydraulic and other test systems, $86.00

MICROBEAM ANALYSIS (TC 202)

ISO 22309:2011, Microbeam analysis - Quantitative analysis using energy-dispersive spectrometry (EDS) for elements with an atomic number of 11 (Na) or above, $104.00

PHOTOGRAPHY (TC 42)

ISO 18934:2011, Imaging materials - Multiple media archives - Storage environment, $65.00

PROJECT COMMITTEE: PSYCHOLOGICAL ASSESSMENT (TC 230)

ISO 10667-1:2011, Assessment service delivery - Procedures and methods to assess people in work and organizational settings - Part 1: Requirements for the client, $98.00

ISO 10667-2:2011, Assessment service delivery - Procedures and methods to assess people in work and organizational settings - Part 2: Requirements for service providers, $104.00

ROAD VEHICLES (TC 22)

ISO 15765-1:2011, Road vehicles - Diagnostic communication over Controller Area Network (DoCAN) - Part 1: General information and use case definition, $57.00

RUBBER AND RUBBER PRODUCTS (TC 45)

ISO 248-1:2011, Rubber, raw - Determination of volatile-matter content - Part 1: Hot-mill method and oven method, $80.00

ISO Technical Reports

GRAPHIC TECHNOLOGY (TC 130)

ISO/TR 12705:2011, Graphic technology - Laboratory test method for chemical ghosting in lithography, $49.00

ISO Technical Specifications

INDUSTRIAL AUTOMATION SYSTEMS AND INTEGRATION (TC 184)

ISO/TS 15926-7:2011, Industrial automation systems and integration - Integration of life-cycle data for process plants including oil and gas production facilities - Part 7: Implementation methods for the integration of distributed systems: Template methodology, $206.00

ISO/TS 15926-8:2011, Industrial automation systems and integration - Integration of life-cycle data for process plants including oil and gas production facilities - Part 8: Implementation methods for the integration of distributed systems: Web Ontology Language (OWL) implementation, $149.00

TRANSPORT INFORMATION AND CONTROL SYSTEMS (TC 204)

ISO/TS 16407-1:2011, Electronic fee collection - Evaluation of equipment for conformity to ISO/TS 17575-1 - Part 1: Test suite structure and test purposes, $206.00

ISO/TS 16410-1:2011, Electronic fee collection - Evaluation of equipment for conformity to ISO/TS 17575-3 - Part 1: Test suite structure and test purposes, $220.00

ISO/IEC JTC 1, Information Technology

ISO/IEC 14443-2/Amd1:2011, Identification cards - Contactless integrated circuit cards - Proximity cards - Part 2: Radio frequency power and signal interface - Amendment 1: Limits of electromagnetic disturbance levels parasitically generated by the PICC, $16.00

ISO/IEC 14443-3/Amd1:2011, Identification cards - Contactless integrated circuit cards - Proximity cards - Part 3: Initialization and anticollision - Amendment 1: Electromagnetic disturbance handling and single-size unique identifier, $16.00

ISO/IEC 14496-3/Cor2:2011, Information technology - Coding of audio-visual objects - Part 3: Audio - Corrigendum 2, FREE

ISO/IEC 14496-5/Amd5/Cor1:2011, Information technology - Coding of audio-visual objects - Part 5: Reference software - Amendment 5: Reference software extensions for error resilient simple scalable profile - Corrigendum 1, FREE

ISO/IEC 14496-5/Amd10/Cor5:2011, Information technology - Coding of audio-visual objects - Part 5: Reference software - Amendment 10: SSC, DST, ALS and SLS reference software - Corrigendum 5, FREE

ISO/IEC 23003-1/Amd1/Cor1:2011, Information technology - MPEG audio technologies - Part 1: MPEG Surround - Amendment 1: Conformance testing - Corrigendum 1, FREE

ISO/IEC 23003-1/Amd2/Cor2:2011, Information technology - MPEG audio technologies - Part 1: MPEG Surround - Amendment 2: Reference software - Corrigendum 2, FREE

ISO/IEC 14496-26/Cor4:2011, Information technology - Coding of audio-visual objects - Part 26: Audio conformance - Corrigendum 4, FREE

ISO/IEC 24791-2:2011, Information technology - Radio frequency identification (RFID) for item management - Software system infrastructure - Part 2: Data management, $98.00

ISO/IEC 29341-19-10:2011, Information technology - UPnP Device Architecture - Part 19-10: Solar Protection Blind Device Control Protocol - Two Way Motion Motor Service, $92.00

IEC Standards

AUDIO, VIDEO AND MULTIMEDIA SYSTEMS AND EQUIPMENT (TC 100)

IEC 61937-1 Amd.1 Ed. 2.0 b:2011, Amendment 1 - Digital audio - Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 - Part 1: General, $21.00

IEC 61937-2 Ed. 2.0 b:2007, Digital audio - Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 - Part 2: Burst-info, $56.00

IEC 62297-1 Ed. 1.0 b:2005, Triggering messages for broadcast applications - Part 1: Format, $117.00

BARE ALUMINIUM CONDUCTORS (TC 7)

IEC 61394 Ed. 1.0 en:2011, Overhead lines - Requirements for greases for aluminium, aluminium alloy and steel bare conductors, $97.00

DOCUMENTATION AND GRAPHICAL SYMBOLS (TC 3)

IEC 62027 Ed. 2.0 b:2011, Preparation of object lists, including parts lists, $143.00

IEC/TR 62711 Ed. 1.0 en:2011, Mnemonics and designations of symbols for measuring relays, instruments and related device, $117.00

ELECTRIC TRACTION EQUIPMENT (TC 9)

IEC 61373 Ed. 2.0 b Cor.1:2011, Corrigendum 1 - Railway applications - Rolling stock equipment - Shock and vibration tests, $0.00

ELECTRICAL INSTALLATIONS OF BUILDINGS (TC 64)

IEC 60364-4-44 Ed. 2.0 b Cor.2:2011, Corrigendum 2 - Low-voltage electrical installations - Part 4-44: Protection for safety - Protection against voltage disturbances and electromagnetic disturbances, $0.00

IEC/TR 60479-4 Ed. 2.0 b:2011, Effects of current on human beings and livestock - Part 4: Effects of lightning strokes, $107.00

INDUSTRIAL PLUGS AND SOCKET-OUTLETS (TC 23H)

IEC 62196-1 Ed. 2.0 b:2011, Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 1: General requirements, $250.00

IEC 62196-2 Ed. 1.0 b:2011, Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional compatibility and interchangeability requirements for a. c. pin and contact-tube accessories, $158.00

INDUSTRIAL-PROCESS MEASUREMENT AND CONTROL (TC 65)

IEC 60534-8-2 Ed. 2.0 b:2011, Industrial-process control valves - Part 8-2: Noise considerations - Laboratory measurement of noise generated by hydrodynamic flow through control valves, $107.00

LAMPS AND RELATED EQUIPMENT (TC 34)

IEC 60598-1 Ed. 7.0 b Cor.1:2011, Corrigendum 1 - Luminaires - Part 1: General requirements and tests, $0.00

IEC 62442-1 Ed. 1.0 b:2011, Energy performance of lamp controlgear - Part 1: Controlgear for fluorescent lamps - Method of measurement to determine the total input power of controlgear circuits and the efficiency of the controlgear, $97.00

OTHER

IECEX 01A Ed. 1.0 en:2008, IEC System for Certification to Standards relating to Equipment for use in Explosive Atmospheres (IECEx System) - An Informative Guide comparing various elements of both IECEx and ATEX, $0.00

IECEX 02A Ed. 2.0 en:2011, IEC System for Certification to Standards relating to Equipment for use in Explosive Atmospheres (IECEx System) - Guidance for Applicants seeking IECEx Certification under the IECEx Certified Equipment Scheme, $0.00

IECEX 03A Ed. 1.0 en:2008, IEC System for Certification to Standards relating to Equipment for use in Explosive Atmospheres (IECEx System) - Guidance for Applications from Service Facilities seeking IECEx Certification, $0.00

CISPR 16-1-1 Ed. 3.0 b Cor.2:2011, Corrigendum 2 - Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-1: Radio disturbance and immunity measuring apparatus - Measuring apparatus, $0.00

Registration of Organization Names in the United States

The Procedures for Registration of Organization Names in the United States of America (document ISSB 989) require that alphanumeric organization names be subject to a 90-day Public Review period prior to registration. For further information, please contact the Registration Coordinator at (212) 642-4946.

The following is a list of alphanumeric organization names that have been submitted to ANSI for registration. Alphanumeric names appearing for the first time are printed in bold type. Names with confidential contact information, as requested by the organization, list only public review dates.

PUBLIC REVIEW

Viewray

Public Review: October 7, 2011 to January 3, 2012

NOTE: Challenged alphanumeric names are underlined. The Procedures for Registration provide for a challenge process, which follows in brief. For complete details, see Section 6.4 of the Procedures.

A challenge is initiated when a letter from an interested entity is received by the Registration Coordinator. The letter shall identify the alphanumeric organization name being challenged and state the rationale supporting the challenge. A challenge fee shall accompany the letter. After receipt of the challenge, the alphanumeric organization name shall be marked as challenged in the Public Review list. The Registration Coordinator shall take no further action to register the challenged name until the challenge is resolved among the disputing parties.

Proposed Foreign Government Regulations

Call for Comment

U.S. manufacturers, exporters, regulatory agencies and standards developing organizations may be interested in proposed foreign technical regulations issued by Member countries of the World Trade Organization (WTO). In accordance with the WTO Agreement on Technical Barriers to Trade (TBT Agreement), Members are required to report proposed technical regulations that may significantly affect trade to the WTO Secretariat in Geneva, Switzerland. In turn, the Secretariat disseminates the information to all WTO Members. The purpose of this requirement is to provide global trading partners with an opportunity to review and comment on the regulations before they become final.

The National Center for Standards and Certification Information (NCSCI) at the National Institute of Standards and Technology (NIST), distributes these proposed foreign technical regulations to U.S. stakeholders via an online service, Notify U.S. Notify U.S. is an e-mail and Web service that allows interested U.S. parties to register, obtain notifications, and read full texts of regulations from countries and for industry sectors of interest to them. To register for Notify U.S., please go to Internet URL: http://www.nist.gov/notifyus/ and click on “Subscribe”.

NCSCI is the WTO TBT Inquiry Point for the U.S. and receives all notifications and full texts of regulations to disseminate to U.S. Industry. For further information, please contact: NCSCI, NIST, 100 Bureau Drive, Gaithersburg, MD 20899-2160; Telephone: (301) 975-4040; Fax: (301) 926-1559; E-mail: ncsci@nist.gov or notifyus@nist.gov.

Information Concerning

American National Standards

INCITS Executive Board

ANSI Accredited SDO and US TAG to ISO/IEC JTC 1, Information Technology

The InterNational Committee for Information Technology Standards (INCITS), an ANSI accredited SDO, is the forum for information technology developers, producers and users to create and maintain formal de jure IT standards. INCITS' mission is to promote the effective use of Information and Communication Technology through standardization in a way that balances the interests of all stakeholders and increases the global competitiveness of the member organizations.

The INCITS Executive Board serves as the consensus body with its oversight of programs of its 30+ Technical Committees. Additionally, the INCITS Executive Board exercises international leadership in its role as the US Technical Advisory Group (TAG) to ISO/IEC JTC 1, Information Technology.

The INCITS Executive Board seeks to broaden its membership base and is recruiting new participants in all membership categories:

- special interest (user, academic, consortia)
- non-business (government and major/minor SDOs)
- business (large/small businesses and consultants)

Membership in the INCITS Executive Board is open to all directly and materially affected parties in accordance with INCITS membership rules. To find out more about participating on the INCITS Executive Board, please contact Jennifer Garner at 202-626-5737 or jgarner@itic.org.

Call for Members

Society of Cable Telecommunications

ANSI Accredited Standards Developer

SCTE, an ANSI-accredited SDO, is the primary organization for the creation and maintenance of standards for the cable telecommunications industry. SCTE's standards mission is to develop standards that meet the needs of cable system operators, content providers, network and customer premesis equipment manufacturers, and all others who have an interest in the industry through a fair, balanced and transparent process.

SCTE is currently seeking to broaden the membership base of its ANS consensus bodies and is interested in new members in all membership categories to participate in new work in fiber-optic networks, advanced advertising, 3D television, and other important topics. Of particular interest is membership from the content (program and advertising) provider and user communities.

Membership in the SCTE Standards Program is open to all directly and materially affected parties as defined in SCTE's membership rules and operating procedures. More information is available at www.scte.org or by email from standards@scte.org.

ANSI Accredited Standards Developers

Administrative Reaccreditation

ASC Z50 – Safety Requirements for Bakery Equipment

At the direction of ANSI's Executive Standards Council (ExSC), the reaccreditation of Accredited Standards Committee Z50, Safety Requirements for Bakery Equipment has been administratively approved under its recently revised operating procedures for documenting consensus on proposed American National Standards, effective October 12, 2011. For additional information, please contact the Secretariat of ASC Z50, the American Society of Baking: Mr. Toby Steward, Chair, Z50 Safety and Sanitation Committee, TNA North America, Inc., 243 Reade Drive, Cogan Station, PA 17728; PHONE: (570) 494-0624; FAX: (570) 494-0603; e-mail: toby.steward@tnasolutions.com.

Approval of Reaccreditation

Building Performance Institute, Inc. (BPI)

ANSI's Executive Standards Council has approved the reaccreditation of the Building Performance Institute, Inc. (BPI), a full ANSI Organizational Member, under its recently revised operating procedures for documenting consensus on proposed American National Standards, effective October 14, 2011. For additional information, please contact: Mr. Bruce DeMaine, Director of Certifications and Standards, Building Performance Institute, Inc., 107 Hermes Road, Suite 110, Malta, NY 12020; PHONE: (518) 899-2727; FAX: (518) 899-1622; e-mail: BDemaine@bpi.org.

International Organization for Standardization (ISO)

Call for International (ISO) Secretariat

ISO/TC 96 – Cranes

ANSI has been informed by BSI (United Kingdom), the ISO delegated secretariat, that they wish to relinquish the role of the secretariat (and hence, SC 3 – Selection of wire ropes, and SC 8 – Jib cranes). ISO/TC 96 operates under the following scope:

> Standardization in the field of cranes and related equipment which suspend loads by means of a load-handling device, particularly in respect of terminology, load rating, testing, safety, general design principles, maintenance, operation and load lifting attachments.

Information concerning the United States retaining the role of international secretariat may be obtained by contacting ANSI at isot@ansi.org.

BSR/ASHRAE Addendum b
to ANSI/ASHRAE Standard 15-2010

Public Review Draft

ASHRAE® Standard

Proposed Addendum b to Standard 15-2010, *Safety Standard for Refrigeration Systems*

First Public Review (October 2011) (Draft Shows Proposed Changes to Current Standard)

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed addendum, go to the ASHRAE website at http://www.ashrae.org/technology/page/331 and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE web site) remains in effect. The current edition of any standard may be purchased from the ASHRAE Bookstore @ http://www/ashrae.org or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE web site @ http://www/ashrae.org.

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AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, INC.
1791 Tullie Circle, NE Atlanta GA 30329-2305

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

This addendum clarifies the location requirements for machinery room mechanical ventilation. Section 8.11.3 states that "Machinery rooms shall be vented to the outdoors, utilizing mechanical ventilation in accordance with Sections 8.11.4 and 8.11.5." This addendum addresses the allowable locations for inlets/intakes to the exhaust ventilation. Additional guidance for the practicing engineer can be found in the *User's Manual for ANSI/ASHRAE Standard 15-2001*, including illustrations and suggested methods.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum b to 15-2010

Revise clause 8.11.4 as follows.

8.11.4 Mechanical ventilation referred to in Section 8.11.3 shall be by one or more power-driven fans capable of exhausting air from the machinery room at least in the amount given in the formula in Section 8.11.5. To obtain a reduced airflow for normal ventilation, multiple fans or multispeed fans shall be used. Provision shall be made for inlet air to replace that being exhausted. Openings for inlet air shall be positioned to avoid recirculation. Air supply and exhaust ducts to the machinery room shall serve no other area. The discharge of the air shall be to the outdoors in such a manner as not to cause a nuisance or danger. The mechanical exhaust inlet(s) shall be located in an area where refrigerant from a leak is likely to concentrate, in consideration of the location of the replacement air path(s), refrigerating machine(s), and the density of the refrigerant relative to air.

BSR/ASHRAE Addendum c
to ANSI/ASHRAE Standard 15-2010

Public Review Draft

ASHRAE® Standard

Proposed Addendum c to Standard 15-2010, *Safety Standard for Refrigeration Systems*

First Public Review (October 2011) (Draft Shows Proposed Changes to Current Standard)

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FOREWORD

This addendum clarifies that design pressure is expressed in terms of relative pressure or gauge pressure (not absolute pressure). This is consistent with the 2010 ASME Boiler & Pressure Vessel Code, Section VIII, Division 1, Subsection A 'General Requirements', Part UG 'General Requirements for All Methods of Construction and All Materials', paragraph UG-21, which states in part "Each element of a pressure vessel shall be designed for at least the most severe condition of coincident pressure … and temperature expected in normal operation. For this condition, the maximum difference in pressure between the inside and outside of a vessel, or between any two chambers of a combination unit, shall be considered."

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum c to 15-2010

Revise the definition of design pressure as follows.

3. DEFINITIONS

design pressure: the maximum gauge pressure for which a specific part of a refrigerating system is designed.

BSR/ASHRAE Addendum d
to ANSI/ASHRAE Standard 15-2010

Public Review Draft

ASHRAE® Standard

Proposed Addendum d to Standard 15-2010, *Safety Standard for Refrigeration Systems*

First Public Review (October 2011) (Draft Shows Proposed Changes to Current Standard)

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FOREWORD

This addendum is intended to more closely harmonize Standard 15 with the 2012 International Mechanical Code (IMC) section 1101.10, which states:

> **1101.10 Locking access port caps.** Refrigerant circuit access ports located outdoors shall be fitted with locking-type tamper-resistant caps or shall be otherwise secured to prevent unauthorized access.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum d to 15-2010

Add clause 11.3.1 as follows.

11. GENERAL REQUIREMENTS

…

11.3 Charging, Withdrawal, and Disposition of Refrigerants.

No service containers shall be left connected to a system except while charging or withdrawing refrigerant. Refrigerants withdrawn from refrigerating systems shall be transferred to approved containers only. Except for discharge of pressure-relief devices and fusible plugs, incidental releases due to leaks, purging of noncondensibles, draining oil, and other routine operating or maintenance procedures, no refrigerant shall be discharged to the atmosphere or to locations such as a sewer, river, stream, or lake.

11.3.1 Refrigerant Access. Refrigerant circuit access ports located outdoors shall be secured to prevent unauthorized access.

BSR/ASHRAE Addendum e
to ANSI/ASHRAE Standard 15-2010

Public Review Draft

ASHRAE® Standard

Proposed Addendum e to Standard 15-2010, *Safety Standard for Refrigeration Systems*

First Public Review (October 2011) (Draft Shows Proposed Changes to Current Standard)

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FOREWORD

This addendum removes an obsolete Appendix from Standard 15, pertaining to calculating allowable concentration for refrigerant blends. Similar information is now in Section 7.2 and Informative Appendix G of Standard 34-2010, but using the more up to date term "Refrigerant Concentration Limit" or RCL.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum e to 15-2010

Remove Informative Appendix A in its entirety.

~~**INFORMATIVE APPENDIX A—**~~
~~**CALCULATIONS OF THE MAXIMUM**~~
~~**ALLOWABLE CONCENTRATION (Cm) OF A BLEND**~~

~~**A1. FOR 100 lb OF BLEND, DETERMINE THE IDEAL GAS VOLUMES OCCUPIED BY EACH COMPONENT AND BY THE BLEND AT 70°F AND 1 atm**~~

~~$387\ W_1/(MW_1) = V_1\ V_T = V_1 + V_2 \ldots V_i$~~
~~$387\ W_2/(MW_2) = V_2$~~
~~—~~
~~—~~
~~—~~
~~$387\ W_i/(MW_i) = V_i$~~
~~W_i = weight (lb) of component i in 100 lb of blend~~
~~MW_i = molecular weight of component i~~
~~V_i = volume (ft^3) of component i in 100 lb of blend at 70°F and 1 atm pressure~~
~~V_T = volume (ft^3) of the blend at 70°F and 1 atm pressure~~

A2. DETERMINE THE DILUTION VOLUME REQUIRED FOR THE 100 lb OF BLEND AND EACH COMPONENT THEREIN

$V_1/LV_1 = DV_1$

—

—

—

$V_i/LV_i = DV_i$

$V_T/LV_{max} = DV_T$

LV_i = (limiting volume percent)/100

DV_i = dilution volume required for weight (W_i) of component *i*

LV_{max} = the highest value of LV_i

A3. DETERMINE THE MAXIMUM ALLOWABLE CONCENTRATION (C_m) OF A BLEND

C_m = (100 lb/DV_{max})1000

C_m = the maximum allowable concentration of blend lb/1000 ft^3 (multiply this value by 0.016 to obtain D_m in kg/m^3)

DV_{max} = the largest of the values DV_1, DV_2, DV_i, DV_T

BSR/ASHRAE Addendum f
to ANSI/ASHRAE Standard 15-2010

Public Review Draft

ASHRAE® Standard

Proposed Addendum f to Standard 15-2010, *Safety Standard for Refrigeration Systems*

First Public Review (October 2011) (Draft Shows Proposed Changes to Current Standard)

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FOREWORD

This addendum removes obsolete information from Standard 15-2010, as follow up to the removal of Standard 15-2007 Appendix B (Guidelines For Emergency Discharge Of Refrigerants When Required By Local Codes). For reference, related information can be found in ANSI/IIAR Standard 2-2008.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum f to 15-2010

Remove section 8.13 in its entirety and renumber the remainder of Section 8 accordingly.

~~**8.13 Manual Emergency Discharge of Ammonia Refrigerant.** When required by the AHJ, manual emergency discharge or diffusion arrangements for ammonia refrigerants shall be provided.~~

Proposed Revision to:

Draft: August 2011

CAST COPPER ALLOY SOLDER JOINT PRESSURE FITTINGS

ASME B16.18

TABLE 1 INTERNAL WORKING-PRESSURE RATING FOR CAST COPPER ALLOY FITTINGS, psi (kPa)

Standard Water Tube Size	–20°F to 100°F (–29°C to 38°C)	150°F (66°C)	200°F (93°C)	250°F (121°C)	300°F (149°C)	350°F (177°C)	400°F (204°C)
1/4	910 (6280)	770 (5340)	725 (5020)	725 (5020)	710 (4920)	605 (4190)	455 (3140)
3/8	775 (5360)	660 (4560)	620 (4290)	620 (4290)	610 (4200)	515 (3570)	385 (2680)
1/2	720 (4970)	610 (4220)	575 (3980)	575 (3980)	565 (3890)	480 (3310)	360 (2480)
5/8	630 (4350)	535 (3700)	505 (3480)	505 (3480)	490 (3410)	420 (2900)	315 (2170)
3/4	580 (4010)	490 (3410)	465 (3210)	465 (3210)	455 (3140)	385 (2670)	290 (2000)
1	490 (3400)	420 (2890)	395 (2720)	395 (2720)	385 (2660)	325 (2270)	245 (1700)
1 1/4	435 (3020)	370 (2570)	350 (2420)	350 (2420)	340 (2370)	290 (2010)	~~315 (1510)~~
1 1/2	405 (2810)	345 (2390)	325 (2250)	325 (2250)	315 (2200)	270 (1870)	200 (1400)
2	360 (2500)	305 (2130)	290 (2000)	290 (2000)	280 (1960)	240 (1670)	180 (1250)
2 1/2	335 (2310)	285 (1960)	265 (1850)	265 (1850)	260 (1810)	220 (1540)	165 (1150)
3	315 (2180)	265 (1850)	250 (1740)	250 (1740)	245 (1710)	210 (1450)	155 (1090)
3 1/2	300 (2090)	255 (1770)	240 (1670)	240 (1670)	235 (1630)	200 (1390)	150 (1040)
4	290 (2020)	245 (1710)	230 (1610)	230 (1610)	225 (1580)	195 (1340)	145 (1010)
5	265 (1850)	225 (1570)	215 (1480)	215 (1480)	210 (1450)	175 (1230)	130 (920)
6	250 (1720)	210 (1460)	200 (1380)	200 (1380)	195 (1350)	165 (1150)	125 (860)
8	270 (1860)	225 (1580)	215 (1490)	215 (1490)	210 (1460)	180 (1240)	135 (930)
10	270 (1860)	230 (1580)	215 (1490)	215 (1490)	210 (1460)	180 (1240)	135 (930)
12	250 (1	215 (1480)	200 (1390)	200 (1390)	195 (1360)	165 (1160)	125 (870)

215 (1510)

740

Replace the entire 200F(93C) column with that shown below. 250F(121C) column was transposed to 200F(93C).

~~745 (5130)~~
635 (4380)
585 (4060)
515 (3555)
475 (3275)
400 (2780)
355 (2470)
330 (2300)
295 (2045)
270 (1890)
255 (1785)
245 (1705)
~~240 (1650)~~
~~220 (1515)~~
~~205 (1410)~~
220 (1520)
220 (1525)
205 (1425)

235
215
200

on 4.
e largest opening of the fitting.
, as shown in Nonmandatory Annex C, then rounded down to the nearest unit of

E 2 INSPECTION TOLERANCES

ater Tube read Size	Plus or Minus in.	mm
/8	0.05	1.3
/4	0.06	1.5
ncl.	0.08	2.0
/2 incl.	0.11	2.8
	0.12	3.2
	0.16	4.0
2	0.20	5.2

Tracking Number 332i5r2
Revision to *Sustainability assessment for Resilient Floor Coverings*
 Issue 5, Draft 2 (October 2011)

Sustainability assessment for resilient floor coverings

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9.3.5 Prerequisite - Prohibitions on forced labor

The manufacturer shall demonstrate that it does not engage in or permit the use of forced or compulsory labor (per ILO conventions C29 and C105) at its facilities and those of its key suppliers (key suppliers of raw materials produced in countries where regulation or law exist prohibiting forced or compulsory labor and which support ILO conventions C29 and C105, satisfy this prerequisite with reference to the applicable regulation).

9.3.6 Prerequisite - Prohibitions on child labor

The manufacturer shall demonstrate that it does not operate facilities or source key supplies (key suppliers of raw materials produced in countries where regulation or law exist prohibiting forced or compulsory labor and which support ILO conventions C29 and C105, satisfy this prerequisite with reference to the applicable regulation) that do not follow the ILO Convention 182.

Reason: This revision addresses both countries with regulation and those without.

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Tracking Number 332i6r2
Revision to *Sustainability assessment for Resilient Floor Coverings*
 Issue 6, Draft 2 (October 2011)

Sustainability assessment for resilient floor coverings

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6.4 Management of water resources

The intent of the criteria within this section is to encourage the conservation of water resources and protection of water quality.

6.4.1 Prerequisite - Water use inventory

The manufacturer shall complete an inventory of water use including identification of quantity of water used, quantity consumed (e.g., loss through evaporation), and sources (e.g., municipal potable, direct capture, on-site wells, reclaimed wastewater.).

6.4.2 Reduced water consumption

The manufacturer shall receive one point on a per-unit basis from 2000 or later:

- an average 1% water reduction per year over a given 5 year period; or

- 5% reduction of water consumption over the last ten years; or

- significant reduction for a lesser multi-year time period that obviously results in either of the above. For this 3rd option to be considered, the following shall be documented:

  - 3 or 4 years of data; and

  - the manufacturer shall specifically demonstrate how this 'obvious reduction' is occurring; by documenting the process change or technology advance that is causing the notable reductions.

Reason: Two years is not enough data due to the possibility of 2nd year being an outlier.

6.4.3 Water quality

The manufacturer shall document that wastewater released either to a publicly owned treatment works (POTW), or directly to the environment, is of a quality equal to or better than the quality of the supplied water according to established standards. A manufacturer can earn either one or two points, as detailed below:

- The manufacturer shall receive one point if the wastewater's quality meets tertiary wastewater treatment standards; or

- The manufacturer shall receive two points if the wastewater's quality meets drinking water level standards.

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Summary of Changes between the December 2009 public review and October 2011 ballot of BSR/PRCA 1.0-.3:200x Ropes Challenge Course Installation, Operation & Training Standards.

This is a summary of substantive/technical changes proposed as a result of persuasive public comments received from materially affected parties throughout the industry during the December 21, 2009 public review (2nd public review). (Persuasive comments received previously during the first public review and the prior PRCA informal public review were all included in the document re-circulated for the 2nd public review period).

On October 4th, 2011 the Standards Committee (an industry and materially affected party consensus group) completed a ballot approving the previously reviewed and published candidate American National Standard BSR/PRCA 1.0-.3:200x Ropes Challenge Course Installation, Operation & Training Standards with the inclusion of these changes.

This ANSI public review is for review and comment upon the substantive/technical changes listed herein only.

NOTE: Only the affected portions of the previously reviewed standard document are shown herein. Any additional material is provided for context only and is not open for comment except as it is directly related to the proposed change.

To submit a comment on these specific proposed substantive/technical changes, go to the http://www.prcainfo.org website and download the required comment form. Comment forms must be fully completed in accordance with the instructions failure to do so may result in the comment not being considered with no further action required. Comments are to be submitted electronically to info@prcainfo.org with a copy forwarded to the ANSI BSR at psa@ansi.org .

The relevant Part of the standard is identified by ***bold font in italics*.** The affected standard including the specific standard clause identification is identified by bold font and **underlining .**
The proposed substantive/technical changes are indicated in legislative format: ~~strikethrough~~ indicates the deletion of the word, phrase or material; underline indicates insertion of new wording, phrases or material.

In all Parts (1.0, 1.1, 1.2 1.3)
II Purpose The purpose of this Standard is to provide a ~~uniform~~ minimal acceptable level of performance requirements on ropes challenge courses by delineating a system of specifications, safety and performance criteria and principles that: a) Reflect the current ~~state-of-the-art~~ minimal acceptable standards in ropes challenge course equipment, equipment design, adequate safety factors, safety features, maintenance of equipment and industry accepted level of safe usage. B) Provide ~~guidelines that can be used~~ minimum standards for course evaluations, insurance criteria, and professional development

In all Parts (1.0, 1.1, 1.2 1.3)
VI. General To establish ~~best~~ minimum ~~application practices~~ standards.

Part 1.1 Safety, Testing and Inspection Requirements for Installation, Systems, Components & Equipment for Ropes Challenge Courses

A.1.4. Maintenance Course areas shall be maintained and kept reasonably free of any recognized dangerous obstacles or known hazards.

A.2.1. Selection c) The use of dead trees as high action/activity support structures shall be prohibited.

A.3.1. Selection b) Rock anchor connectors shall have a minimum pullout strength of 5,000 pounds (22.2 kN) per user or ~~four~~ two (2) times the maximum intended applied loads.

A.4.1. Selection of Solid Wood Poles for Support Structures a) Wood poles used for support structures shall be new or like new unused utility poles rated and classified, graded and stamped in compliance with ANSI 05.1 ~~2002~~ 2008 or equivalent applicable local standard.

A.4.3. Depth and Foundation a) Minimum wood pole setting depth ~~shall~~ should be either five feet (1.52m) or ten percent (10%) of the poles overall length, plus an additional two feet (61cm) whichever is greater.

b) Low challenge course elements utilizing short length poles ~~shall~~ should be set to a depth of ten percent (10%) of the pole overall length, plus an additional two feet (61cm).

A.6.2. Suspended Elevated Platforms b) i) a) ~~All hardware and materials shall be weather / corrosion resistant and of adequate strength to meet the requirements of this standard.~~ All hardware and materials shall be appropriate to the application and environment and be of adequate strength to meet the requirements of this standard.

A.7.1. Climbing Wall Construction b) Construction shall also comply with the applicable portions of the Climbing Wall ~~Industry Group (CWIG) "Specifications for Artificial Climbing Walls" (revised 1993)~~ Association "General Specification for the Design and Engineering of Artificial Climbing Structures" (1st Ed 2/5/09) or EN 12572-1:2007 ~~whichever is greater~~. as applicable.

A.8.3. Ladders, Use c) Ladders being utilized to access platforms, roofs, or any structure must extend a minimum of 3 ft (0.91m) beyond the edge of the surface being accessed as applicable.

A.9.1. Construction c) Action/activity systems / elements shall be free of ~~potentially~~ recognized dangerous parts that are not necessary as components of the action/activity system or element.

B.3.3. Bolt Placement a) … Placement of ~~top~~ all through bolts in other materials shall follow the manufacturers' recommendations.
b) When multiple belay (life safety) and related guy cable termination points are required in wood poles, attachments shall be within 12 inches of another primary bolt attachment configured for that same load line or system.
c) Application; distance in other materials shall follow the manufacturers' recommendations.

B.8.0 ~~Gripple~~ Locking Wire Rope ~~Grab~~ Grip / Equivalent Tensioning /Termination Devices This change is to meet ANSI commercial terms requirements. The term Gripple Wire Rope Grab has been changed throughout the document to read locking wire rope grip.

C.3.1. Use, Length, Location, Foundation a) Down guy cables (wire rope) terminations on the upright support structure shall ~~be within 12 inches (30.48cm) or less above or below the termination of the primary load generating cable.~~ be located above or below the termination of the primary load generating cable as applicable to the engineering requirements for the material constituting the support structure (steel, wood, concrete, etc).
d) Guy cables (wire rope) ~~should not be set at angles exceeding 45°. Guy cables (wire rope) should ideally retain a 1:1~~ shall have an appropriate ratio of rise to run relative to the installation point on the support system.

C.4.1. Construction Staples shall be made of ~~forged corrosion resistant steel~~ forged steel, with a corrosion resistant treatment as applicable to the installation. For wood poles or trees, staples shall be a minimum ½ inch (12.7mm) in diameter and a minimum of 6 inches (15.24cm) in length.

C.4.2. Use c) Staples ~~shall~~ should not be used to terminate any in line pull applications.

C.4.3. Installation a) Staples for climbing access shall be 6 in. (15.24cm) to 8 in. (20.32cm) in length…
b) Staple fixed ladder steps should be installed parallel to each other or staggered
c) Staples ~~shall~~ in wood poles or trees should be installed at a minimum 5 to 10 degree positive angle and imbedded a minimum of 50% but not exceeding 60% of their length for hand and/or foot holds.
d) Staple placements in wood poles or trees may be predrilled with a smaller diameter bit.

C.4.4. Staples as Work Positioning / Fall Arrest Anchors c) Staple placement for fall protection anchor use shall be proof tested and certified for the intended anchorage use by a licensed engineer, Qualified Ropes Challenge Course Professional or Commercial Ropes Course Vendor (Qualified Person) with experience in fall protection anchorage design and installation, prior to initial use and ~~annually~~. thereafter as determined by risk assessment.

D.1.1.Metal Products The typical working load limit (WLL) for metal products shall be determined by appropriate engineering criteria or minimally calculated as the 1:5 ratio of a product's tensile strength or 20% of the manufacturer's rated breaking strength of the product unless otherwise specified by the manufacturer.

E.1.1. General Design Safety Requirements e) ~~Action/activity system moving parts shall not endanger users in an uncontrolled manner~~ Action/activity systems shall be designed to minimize potential injury to the user through an uncontrolled movement of the element
~~**g)** If a potential exists for a user to strike an object in the vicinity of an element, an appropriate safety device or system shall be employed or installed.~~ Re-letter h) through l) as g) through k)
~~**i)** All Courses and action/activity systems shall be designed to allow the site to be evacuated quickly and to facilitate emergency response where required.~~ All courses and action/activity systems shall be designed for prompt evacuation in accordance with the organization's written evacuation and emergency response plan

E.1.2. Course Marking ~~a)~~ ~~Name & address of the Builder/Installer/Manufacturer (if more than one party has been involved with construction at the facility the most recent name shall be posted)~~

~~**b)** The maximum allowable number of users allowed on an element.~~ ~~**c)** Number and date of this current American National Standard~~ Re-letter d) as a).

E.1.3. Action/Activity System Element Designation ~~All elements shall be clearly designated with an individual marking (number or letter) in an order determined by the builder/installer/manufacturer to assist in identification for rescue, inspection and user progression.~~ All repetitive action/activity systems and/or where local regulation requires such, elements shall be clearly designated with an individual marking (number or letter) in an order determined by the builder/installer /manufacturer to assist in identification for rescue and/or inspection purposes.

E.3.1. Considerations c) At a minimum inspections shall be conducted on initial construction, annually, ~~quarterly~~ periodic and operational pre-use as follows:
c) v) Life Safety anchorage recertification ~~inspection~~ proof testing by a Qualified Ropes Challenge Course Professional, Commercial Ropes Course Vendor, or Professional Engineer should be performed on a regular basis following the initial installation certification. A risk management approach should be utilized to determine the regularity of the ~~inspection~~ proof testing based on frequency of use, wear and tear, location and years in service. This may be a part of the annual inspections.
c) vi) Course operators shall have a Qualified Person perform detailed tactile and visual in-house inspections at least ~~quarterly~~ periodically,

E.3.3. Annual Inspection Report Content d) Course history to include construction date, built bys, vendors inspecting or building, last inspection, and other pertinent information to assist in course inspection if applicable and/or available.

E.3.4. ~~Quarterly~~ Periodic Inspection (in-house) a) ~~Quarterly~~ Periodic inspection…

F.1.1. General b) Fall protection safety systems ~~shall be installed~~ or practices shall be utilized throughout the course where a user may fall

F.1.4. Horizontal Fall Arrest (Belay) Non-Cable Sub-systems e) Terminations, connections and attachments of independent non-cable horizontal belay (life safety) members shall have a redundancy system in place, equal to or greater than 80% of the system's engineered ~~tensile~~ strength in the direction of loading.

F.2.3. Fall Protection Anchors, General e) All anchors shall be easily distinguishable, and designed or programmed in such a manner that improper attachment to an element or component that is not capable of supporting the required loads is not ~~possible~~ probable or shall be marked for their appropriate usage.
g) Anchors and anchors systems shall be designed ~~with a degree of rotational freedom~~ to minimize metal on metal wear.
j) Any anchor or ~~object~~ anchor component which a rope or synthetic sling runs over or is threaded through shall have a minimum inner curve radius of .18 inches (4.5mm). (Bend diameter .35 inches (9mm)).

F.5.1. Belay (life safety), Lifeline, Fall Protection - Strength ~~d)~~ ~~Ropes shall have a minimum diameter of .413 (13/32) inches (10.5 mm).~~ ~~e) Static (low stretch) kernmantle ropes used for rappelling / abseiling should have a minimum diameter of 7/16 inch (11mm).~~ Re-letter f through h as d through f.

F.6.3. Construction b) Synthetic rope lanyards shall be a minimum of ½ inch (12mm). ~~in the US and 5/8 inch (16mm) in Ontario.~~
d) Properly sized thimbles ~~shall~~ should be incorporated into the eye termination.

F.6.5. Self Belay Lanyards b) Lanyards for self belay and/or continuous belay systems shall always be extended and suitably anchored ~~at the fullest possible reach~~ above the user to minimize potential fall distance.

F.8.5. Inspection / Replacement Self-retracting lanyards and auto belay systems cables should be inspected for broken wires, kinking, or other damage. Ensure that auto braking systems engage in compliance with the applicable standard

F.12.1. General j) Buckles that are an integral part of the system shall have a corner radius of not les than 0.25 inches (6.4mm) ~~and the manufacturer shall provide written evidence that all load bearing buckles have been proof tested to 2500 pounds (11.12kN).~~

G.2.1. Criteria c) Trees: A certified tree care professional ~~shall~~ should be conferred with on tree health, care, and proper applications for support of engineered loads and termination of materials.

Annex B Design Loads The minimum Factor of Safety to be applied for design load calculations ~~used~~ is dependant on the ropes course application as shown in Table B 2.0, higher factors of safety may be required in some applications based upon manufacturer specifications and standard engineering practice.

Annex C Bolt placement distances When belay cables (wire rope) or down guy cables (wire rope) are used, placement shall be at least 12 inches (30.5cm) from the top of a wood pole. When multiple belay (life safety) and related guy cable termination points are required in wood poles, attachments will be within 12 inches (30.5cm) of another primary bolt attachment configured for that same load line or system.

Annex H Based on industry tests on wood poles and trees the average pull out strength for staples is approximately 2,500 pounds (11.11kN). To maximize staple pull strength in wood substrates the staples shall be installed at a minimum 5 to 10 degree positive angle and imbedded a minimum of 50% but not exceeding 60% of their length for hand and/or foot holds. Staples shall not be used to terminate belay cables (wire rope), elements, or other in-line pull termination applications or for fall arrest anchors except as authorized by these standards.

Annex I F.1 This proof testing is to verify that climbing holds and fasteners have been installed correctly into a base that will support the required loading and subsequent testing is to ensure that they continue to function as intended.
F.4 ~~The pass criterion for fasteners is that no significant movement of the anchor was apparent during testing.~~

Annex J Fall Protection Systems Through bolts, bolted leading edge anchors, cable and rope loops, self –retracting lanyards (SRL – Auto-belays), other anchors and anchorage connectors utilized for direct connection for fall protection during ascent or descent from height shall meet the fall arrest anchor design and strength requirements of this standard.

Part 1.2 Operational Standards for Ropes Challenge Courses

H.2.5. Training e) Ropes challenge course staff training documentation and records of certifications shall be maintained by owners/operators.

H.2.6. Staff Profile Records c) Employees ~~shall have reasonable access to their records and~~ shall be provided a copy of their own records upon request.

H.2.8. Supervision e) ii) If a particular safety system was not addressed in the participant briefing, instruction and ~~aptitude evaluation~~ assessment of the correct usage of the action/activity system…

H.2.10. Participant Safety Briefing d) As applicable to the course, the participant/user safety briefing shall include, but not be limited to, the following**. f) i)** Self-Belay systems: non-continuous self-belay systems assessment shall be conducted on a "test course"

H.2.18. Inspections b) iii) ~~Quarterly~~ Periodic - Course operators shall have a Qualified Person perform detailed tactile and visual in-house inspections ~~quarterly~~ periodically,…**b) v)** Annual and in-house ~~quarterly~~ periodic inspections…Also re-letter ix through xv as I through vii

H.2.19. Retirement of Equipment from Service c) Exceptions: Equipment removed from service but remaining at the facility for training, non-life safety or other non-course use shall be subject to strict procedures to prevent its accidental use.

I.1.2. Other Ropes Challenge Course Employers a) All other ropes challenge course employers, including but not limited to professional engineers working on ropes challenge courses, Qualified Ropes Challenge Course Professionals, and Commercial Ropes Course Vendors, shall comply with the applicable training, equipping, support and safety guidelines in this standard,…

I.1.4. Ropes Challenge Course Facilitator/Guide Level – 2 a)i) be of a minimum age of ~~21~~ 18. ~~**a) ii)** maintain a professional membership in appropriate industry association during the course of employment,~~ Re-Letter iii through v as ii through iv.

I.1.5. Ropes Challenge Course Facilitator/Guide Level-1 ~~**a) ii)** maintain a professional membership in appropriate industry association during the course of employment,~~ Re-Letter iii as ii.

I.1.7. Low Ropes Challenge Course Facilitator Level – 2 a) i) minimum age ~~21~~ 18 ~~**a) ii)** maintain a professional membership in appropriate industry association during the course of employment,~~ Re-Letter iii through v as ii through iv

I.1.9. Ropes Challenge Course Program Intern a) i) be of a minimum age of ~~16~~ 14

I.1.10. Qualified Ropes Challenge Course Instructor a) viii) have undergone ~~instructional competence evaluation and documented peer review by an industry association or submit to a peer review by other QRCCIs~~ a documented training event peer review by either an industry association or an independent QRCCI ~~every three years.~~

I.1.11. Competent Person Trainer a) iv) have completed a "train the trainer" or ~~other formal program to be competent~~ be knowledgeable in the delivery techniques of adult learning and able to apply adult learning principles appropriate to the target audience,

I.1.12. Competent Rescuer Trainer b) ii) CRTs may instruct required fall protection classes for Authorized, Competent and Qualified Persons.

I.2.3. Authorized Person a) i) minimum age of ~~16~~ 14

Part 1.3 Staff Training, Evaluation & Certification for Ropes Challenge Courses
Annex B Skill Sets & Assessment Evidence Guidelines tables

RCC-009 (Elements section) Differentiate between ropes by construction, strength, and type of appropriate application in accordance with ~~organization /~~ industry ~~best practices and~~ standards and organization best practices; Determine rope ~~strength~~ suitability by utilizing available resources (e.g. organization rope log, manufacturer specifications).

RCC-016 (Elements section) Ensure sufficient food and water is available to maintain ~~physical and physiological~~ participant and staff wellbeing during activity; determine … ~~access and interpret meteorological data and determine activity in consideration of~~ use weather information and course restrictions to plan appropriate activities.

RCC-017a (Inspections Section) Differentiate between the requirements for pre-operational and ~~quarterly~~ periodic course inspections; … using appropriate materials/tools/equipment demonstrate and explain a ~~quarterly~~ periodic course inspection

RCC-017b (Inspections section) Differentiate between the requirements for ~~quarterly~~ periodic and annual independent course inspections; using appropriate materials/tools/equipment demonstrate and explain a ~~quarterly~~ periodic course …

RCC-018 (Inspections section) Differentiate between the requirements for pre-operational and ~~quarterly~~ periodic course inspections specific to the organization's course(s); …; using appropriate materials/tools/equipment demonstrate and explain a ~~quarterly~~ periodic course inspection

RCC-019 (Inspections section) Differentiate between the requirements for ~~quarterly~~ periodic and annual independent course inspections; using appropriate materials/tools/equipment demonstrate and explain a ~~quarterly~~ periodic course inspection

RCC-021 (elements section) Ensure sufficient food and water is available to maintain ~~physical & physiological~~ staff and participant wellbeing during activity; … secure ~~and interpret meteorological data and determine activity plans in consideration of~~ weather information and adjust activity plans in accordance with organization's procedures and builder/installer specifications

RCC-022 (elements section) Establish and document pre-activity and ~~q~~uarterly periodic course inspection protocols

RCC-023 (elements section) …determine pre-operational, post operational ~~quarterly~~ periodic and minimum annual independent course inspection protocols
RES-003 (performance consistency) …this unit of competency must be assessed utilizing a minimum of ~~three (3)~~ two (2) belay escape/transfer scenarios

RES-010 (elements section). Establish and maintain rescuer/rescuee relationship/communication, identify and respond to rescuee's emotional state, empower to assist if applicable

In order to respond to public comments to allow for evaluator discretion and flexibility for certifications / proficiency assessments based upon the individual's prior knowledge and experience the "Performance Consistency" sections in the following tables will be changed in relevant part to read "Assessment ~~must~~ should…"
Skill Sets & Assessment Evidence Guidelines tables, Performance Consistency: LM 001, LM 004, LM 013,LM 019, OE/R 001, OE/R 002, OE/R 003, OE/R 004, OE/R 005, OE/R 006, OE/R 007, OE/R 008, RCC 002, RCC 004, RCC 005, RCC 007, RCC 008, RCC 010, RCC 011, RCC 012, RCC 014, RCC 015, RCC 016, RCC 017b, RCC018, RCC 020, RCC 021, RCC 022, RCC 023, FPP 002 RES 001, RES 004, RES 005, RES 010, RES 013, RES 014, RES 015, RES 017, RES 018, T 002, T 004, T 006, T 007, T 008, T 009, T 010, T 011

Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems, BSR/UL 325

1. Revision to Require the Same Level of Evaluation for Types B1 and B2 Devices when Used as the Primary or Secondary Entrapment Protection for Gate Operators

PROPOSAL

25.11 In the evaluation of entrapment protection circuits used in gate operators:

a) The primary entrapment protection device shall be operational,

b) The secondary entrapment protection device shall be operational,

c) An alarm shall be present and functional for a Class I or II operator with a Type A entrapment protection device,

d) Monitoring for the presence and correct operation of an entrapment protection designated as Types B1, B2, or E ~~external device when it is the primary device shall be operational~~, and

e) A Class I or II operator for a horizontal slide gate or vertical lift gate shall not result in gate movement that exceeds that specified in 31.1.19.

Table 31.1

Protection against entrapment

Usage class	Gate operator category			
	Horizontal slide, vertical lift, and vertical pivot		Swing and vertical barrier (arm)	
	Primary type[a]	Secondary type[a]	Primary type[a]	Secondary type[a]
Vehicular I and II	A	B1, B2, or D	A, or C	A, B1, B2, C, or D
Vehicular III	A, B1, or B2	A, B1, B2, D, or E	A, B1, B2, or C	A, B1, B2, C, D, or E
Vehicular IV	A, B1, B2, or D	A, B1, B2, D, or E	A, B1, B2, C, or D	A, B1, B2, C, D, or E
Note - The same type of device shall not be utilized for both the primary and the secondary entrapment protection means. Use of a single device to cover both the opening and closing directions is in accordance with the requirement; however, a single device is not required to cover both directions. A combination of one Type B1 for one direction and one Type B2 for the other direction is the equivalent of one device for the purpose of complying with the requirements of either the primary or secondary entrapment protection means.				
[a] Entrapment protection types:				
Type A - Inherent entrapment protection system. See 31.1.5.				
Type B1 - Provision for connection of, or supplied with, a non-contact sensor (photoelectric sensor or the equivalent). See 31.1.6 - 31.1.9.				

Type B2 - Provision for connection of, or supplied with, a contact sensor (edge device or the equivalent). See 31.1.7 and 31.1.10 - 31.1.12.
Type C - Inherent adjustable clutch or pressure relief device. See 31.1.13.
Type D - Provision for connection of, or supplied with, an actuating device requiring continuous pressure to maintain opening or closing motion of the gate. See 31.1.14 and 31.1.15.
Type E - An audio alarm. See 31.1.7, 31.1.16, 31.1.17, and 31.1.18.

31.1.7 A gate operator installed in accordance with the manufacturer's instructions utilizing entrapment protection designated Types B1, ~~and~~ B2, or E in Table 31.1 ~~as the primary device~~ to comply with 31.1.1 by having provision for connection of such device, or providing such device with the operator, shall monitor for the presence and correct operation of the device, including the wiring to it, at least once during each open and close cycle. The operator shall function as required by 31.1.15 in the event the device is not present or a fault condition occurs which precludes the sensing of an obstruction. A fault condition includes an open or short circuit in the wiring that connects the external entrapment protection device to the operator and the device's supply source.

BSR/UL 498A

1. Addition of Requirements for a Current Tap with an Integral Power Supply with One or More Class 2 Output Low-Voltage Connectors

PROPOSAL

9.13 A current tap with integral power supply with one or more Class 2 output low-voltage connectors shall not permit contact to be made between the Class 2 output connector and current tap line contacts with an attachment plug having a 1-15P configuration. Compliance is checked by inspection and if necessary, by conducting the Separation Test, Section 39.

39 Separation test

39.1 A current tap or an adapter with an integral power supply with one or more Class 2 output low-voltage connectors shall not permit contact to be made between a standard solid-blade attachment plug that has American National Standard detent holes in accordance with Wiring Devices - Dimensional Specifications, ANSI/NEMA WD6, and any live part of the outlet device through the outlet slots when tested as described in this Section.

39.2 Using a polarized attachment plug having a 1-15P configuration, one blade shall be inserted into the slot openings of the Class 2 output connector and the other blade into the slot openings of the current tap contacts with a force of 10 pounds (45 N) in an attempt to contact live parts. A suitable indicating device (such as an ohmmeter, battery-and-buzzer combination, or similar device) is to be connected between the Class 2 output connector and the contacts of the current tap to determine whether contact is made. The attachment plug is to be manipulated in any direction or orientation that may permit access to contact live parts. The attachment plug is applied for approximately 5 seconds in each direction.

4. Addition of Requirements for Outdoor-Use Current Taps

PROPOSAL

6.7 Current taps intended for outdoor use shall be rated 20 amps, 250 V maximum. Outdoor current taps ~~shall not be rated with a NEMA-type enclosure rating such as 3R or 4X~~. additionally marked with an Enclosure Type rating(s) as specified in the Standard for Enclosures for Electrical Equipment, Environmental Considerations, UL 50E, shall also comply with the requirements of 7.11.2, 8.5.2, and 41.2.

7.11 Current taps intended for outdoor use

7.11.2 In addition to the marking requirements contained elsewhere in this standard, a current tap intended for outdoor use that is additionally marked with an Enclosure Type rating(s) as specified in the Standard for Enclosures for Electrical Equipment, Environmental Considerations, UL 50E, shall comply with the marking requirements of

Section SB7 of the Standard for Attachment Plugs and Receptacles, UL 498. The markings on the device shall also include the following:

a) The word, "DANGER", and the following or equivalent statement after the word "DANGER", "RISK OF FIRE AND ELECTRICAL SHOCK - Use Only With Outdoor-Use Cord Sets Having a Minimum Wire Size of 12 AWG".

b) "Suitable For Use With Outdoor Appliances".

c) "Do Not Use With More Than One Extension Cord".

d) "Do Not Overload Extension Cord".

e) "Store Indoors When Not In Use".

8.5 Current taps intended for outdoor use

8.5.2 A current tap intended for outdoor use that is additionally marked with an Enclosure Type rating(s) as specified in the Standard for Enclosures for Electrical Equipment, Environmental Considerations, UL 50E, shall be additionally provided with installation instructions or the smallest unit container of the device shall be marked "Enclosure Type _____ When Mated With _____ " or the equivalent, where the first blank is to be filled in with the UL 50E Enclosure Type rating(s) complying with 41.2, and the second blank is to be filled in with the identification of any necessary attachment plug and receptacle or cord connector in order for that current tap to comply with the environmental enclosure requirements corresponding to that type designation.

41 Test Series for Current Taps Intended for Outdoor Use

41.2 In addition to the performance requirements contained elsewhere in this Standard, current taps intended for outdoor use that are additionally marked with an Enclosure Type rating(s) as specified in the Standard for Enclosures for Electrical Equipment, Environmental Considerations, UL 50E shall comply with the requirements and tests specified in Supplement SB of the Standard for Attachment Plugs and Receptacles, UL 498, for the particular environmental enclosure type appropriate for the intended use and description of the current tap. All tests are to be conducted using:

a) One set of representative devices unmated, with shrouds and flap or screw covers in place, and

b) One set of representative devices fully connected to their intended mating devices with any enclosure type securement means engaged or in place. This set of devices consists of connected combinations of attachment plugs, outdoor current taps and receptacles, or of attachment plugs, outdoor current taps and cord connectors.

5. Addition of Requirements for Current Taps Employing Rotatable Outlet Faces

PROPOSAL

17C Current Taps Employing Rotatable ~~Outlet Faces~~ Outlets

17C.1 The ~~face~~ outlet of a current tap employing a rotational means shall be constructed such that the obstruction requirements described in 11.3 are met in all rotational orientations.

Table 18.1

Summary of tests - Current taps and adapters

Table abbreviated for ease of use

Section	Test sequences	No. of devices[a]	Details
42	Rotational Endurance	6	Devices employing rotatable ~~outlet faces~~ outlets.
43	Resistance	6	Devices employing rotatable ~~outlet faces~~ outlets.
44	Fault Current	6	Devices employing rotatable ~~outlet faces~~ outlets.

[a] A set of representative devices is not prohibited from being used for more than one group of tests when agreeable to all concerned.

42 Rotational Endurance Test

42.1 Six representative current taps employing rotating ~~outlet faces~~ outlets are each to be plugged into a mating receptacle rated 15A, 125 V that is mounted as intended in a standard outlet box connected to a 125 V supply. Devices rated AC Only are to be tested using alternating current with a power factor of the load to be 0.75-0.80. All other devices are to be tested on direct current with a resistive load. A mating 2-pole, 3-wire attachment plug rated 15 A, 125 V is to be inserted into each of the current taps as intended drawing 15 A.

BSR/UL 541

October 21, 2011

SUMMARY OF TOPICS

The following topic for the Standard for Refrigerated Vending Machines, UL 541, is being recirculated:

22. Proposed Editorial Revisions

COMMENTS DUE: November 21, 2011

For your convenience in review, proposed additions to the previously proposed requirements dated August 12, 2011 are shown underlined and proposed deletions are shown ~~lined-out~~.

22. Proposed Editorial Revisions

RATIONALE

Responses to comments have been posted within the 541 Proposal Review Work Area dated August 12, 2011.

PROPOSAL

6.9 ~~ROUTE MAN~~ ROUTE PERSON – The person who regularly opens a vender for such purposes as cleaning, inserting/removing currency or coins, replenishing the product supplied, and making minor adjustments.

PROPOSAL FOR BSR/UL 840

8.4.2 ~~Where surge protective devices are~~ Surge protective devices may be employed in order to improve the transient impulse over-voltage control within ~~the~~ an assembly and decrease required clearance~~s~~ distances. This reduction in required clearance distance is based on the voltage protection rating (VPR) of the surge protective device and the resulting clearance distance as shown ~~to a greater degree than that listed~~ in Table 8.1. ~~, based on the system voltage rating and Over-Voltage Category for the application, the~~ The surge protective device shall comply with 8.4.1 and items a) and b) below:

a) The Measured Limiting Voltage (MLV) of the surge protective device shall not exceed the impulse voltage withstand value provided in Table 8.1 for the measured clearance, and

b) Be provided with one of the following:

1. A Nominal Current Discharge Rating (In) or Operating Duty Cycle based on a kV/kA combination test waveform equal to the values given in Table 8.2. The impulse voltage withstand value chosen shall be at least that equal to the impulse voltage withstand value in Table 8.1 based on the system input voltage and Over-Voltage Category of the equipment under test,

2. A Nominal Current Discharge Rating (In) or Operating Duty Cycle based on a kV/kA combination test waveform equal to the impulse voltage value given in Table 8.2 and current value equal to rated impulse voltage divided by the circuit impedance on the input side of the surge protective device plus 2 ohms. The impulse voltage withstand value chosen shall be at least equal to the impulse voltage withstand value in Table 8.1 based the system input voltage and Over-Voltage Category of the equipment under test, or.

3. The entire assembly complies with the Operating Duty Cycle testing as outlined in the Standard for Surge Protective Devices, UL 1449, using a combination waveform as defined in item 1 above.

BSR/UL 1063

Table 6.8

Nominal strand and conductor dimensions for 19-wire combination round-wire unilay-stranded copper conductors

AWG conductor size	Nominal strand dimensions								E=3A + 2C	
	Large strand				Small strand					
	A		B		C		D			
	Diameter		Cross-sectional area		Diameter		Cross-sectional area		Nominal conductor diameter	
	inch	mm	cmil	mm^2	inch	mm	cmil	mm^2	inch	mm
14	0.0159	0.40	253	0.128	0.0117	0.30	137	0.069	0.071	1.80
12	0.0201	0.51	~~441~~ 404	0.223	0.0147	0.37	217	0.110	0.090	2.29
10	0.0253	0.64	640	0.324	0.0185	0.47	342	0.173	0.113	2.87
9	0.0284	0.72	807	0.408	0.0208	0.53	433	0.219	0.127	3.23
8	0.0319	0.81	1018	0.515	0.0234	0.59	548	0.277	0.143	3.63
6	0.0402	1.02	1616	0.818	0.0294	0.75	864	0.437	0.179	4.55
5	0.0452	1.15	2043	1.034	0.0331	0.84	1096	0.555	0.202	5.13
4	0.0507	1.29	2570	1.301	0.0371	0.94	1376	0.696	0.226	5.74
3	0.0570	1.45	3249	1.644	0.0417	1.06	1739	0.880	0.254	6.45
2	0.0640	1.62	4096	2.073	0.0468	1.19	2190	1.108	0.286	7.26
1	0.0718	1.82	5155	2.609	0.0526	1.34	2767	1.400	0.321	8.15
1/0	0.0807	2.05	6512	3.296	0.0591	1.50	3493	1.768	0.360	9.14
2/0	0.0906	2.30	8208	4.154	0.0663	1.68	4396	2.225	0.404	10.26
3/0	0.1017	2.58	10343	5.234	0.0745	1.89	5550	2.809	0.454	11.53
4/0	0.1142	2.90	13042	6.600	0.0836	2.12	6989	3.537	0.510	12.95

Table 6.12

Maximum acceptable direct-current resistance of 19-wire combination round-wire unilay-stranded copper conductors

Metal coating of strands	AWG size of conductor	20℃		25℃	
		Ohms based on 1000 feet of conductor	Ohms based on 1 kilometer of conductor	Ohms based on 1000 feet of conductor	Ohms based on 1 kilometer of conductor
Each	14	2.78	9.15	2.85	9.32
	~~13~~	~~2.21~~	~~7.26~~	~~2.25~~	~~7.41~~

	12	1.75	5.75	1.78	5.88
	~~11~~	~~1.37~~	~~4.48~~	~~1.39~~	~~4.56~~
	10	1.08	3.55	1.10	3.62
	9	0.857	2.82	0.874	2.87
	8	0.679	2.23	0.692	2.27
	~~7~~	~~0.539~~	~~1.76~~	~~0.550~~	~~1.81~~
strand	6	0.427	1.41	0.436	1.43
	5	0.339	1.11	0.346	1.13
coated	4	0.269	0.882	0.274	0.900
	3	0.213	0.700	0.217	0.713
	2	0.169	0.555	0.172	0.566
	1	0.1340	0.4398	0.1367	0.4485
	1/0	0.1063	0.3487	0.1084	0.3556
	2/0	0.08432	0.2766	0.08598	0.2820
	3/0	0.06688	0.2194	0.06820	0.2238
	4/0	0.05248	0.1722	0.5352	0.1755
	14	2.62	8.62	2.68	8.78
	13	2.08	6.82	2.12	6.97
	12	1.65	5.43	1.68	5.53
	11	1.32	4.30	1.34	4.39
	10	1.039	3.409	1.060	3.476
	9	0.8245	2.705	0.8407	2.758
Each	8	0.6535	2.144	0.6663	2.186
	7	0.5182	1.700	0.5284	1.734
strand	6	0.4122	1.348	0.4192	1.375
	5	0.3261	1.070	0.3225	1.091
uncoated	4	0.2585	0.8481	0.2636	0.8649
	3	0.2050	0.6727	0.2091	0.6860
	2	0.1626	0.5335	0.1659	0.5440
	1	0.1289	0.4230	0.1315	0.4313
	1/0	0.1022	0.3354	0.1042	0.3419
	2/0	0.08108	0.2660	0.08267	0.2712
	3/0	0.06431	0.2110	0.06558	0.2151
	4/0	0.05099	0.1673	0.05200	0.1705

8.2.2 Measurements from which the average thickness of insulation is to be determined are to be made by means of one of the following instruments:

a) A machinist's micrometer caliper may be used. The caliper is to have flat surfaces on the anvil and on the end of the spindle and is to be calibrated to read directly to at least ~~0.0001~~ 0.001 inch or 0.01 mm with each division of a width that facilitates estimation of each measurement to 0.0001 inch or 0.002 mm.

b) A dead-weight dial micrometer may be used. The micrometer is to exert a force of 10 ±2 gf or 0.10 ±0.02 N on a sample through a flat, rectangular presser foot 0.078 by 0.375 inch or 1.98 by 9.52 mm. The anvil of the instrument is to be of the same dimensions as the presser foot. The instrument is to be calibrated as indicated in (a) of this paragraph.

Table 8.1

Minimum acceptable average physical properties of PVC insulation and PVC jacket

Condition of specimens at time of measurement	Minimum acceptable ultimate elongation (1-inch or 25-mm bench marks) - See 8.4.2	Minimum acceptable tensile strength- See 8.4.2
Unaged	100 percent (1 inch or 25 mm)	1500 lbf/in^2 or 10.3 MPa
Aged in a full-draft circulating-air oven for 168 h at 121.0 ± 1.0°C with nylon jacket of construction B removed	Die-cut specimens: 45 percent of the result with unaged specimens	70 percent of the result with unaged specimens
	Other specimens: 65 percent of the result with unaged specimens	
Specimens (with nylon jacket of construction B in place) from wires or cables NOT marked "oil-resistant II" aged in IRM 902 oil for 96 h at 100.0 ± 1.0°C	50 percent of the result with unaged specimens	50 percent of the result with unaged specimens

10.1 General

10.1.1 An insulated conductor or an assembly of conductors, ~~whether for use singly or in a multiple-conductor cable,~~ may be enclosed in a conductive shield.

18.3 In air at rated temperature

18.3.1 This test is to be made on two or more 30-inch or 762-mm specimens each of unaged wire and wire that has been aged in a full-draft circulating-air oven for 168 h at 121.0 ±1.0°C (249.8 ±1.8°F) and within 16 - 48 h after removal from the oven. A section at least 12 inches or 305 mm long at the center of each specimen is to be wrapped with metal foil or immersed in powdered graphite. The wrapped or immersed section, while being held straight, is then to be maintained at a temperature of 90.0 ±1.0°C (194.0 ±1.8°F) for 1 h, following which the test vo ltage indicated in Table 18.1 is to be applied as indicated in 18.2.3 and 18.2.4 (except without increasing the voltage to breakdown) between the conductor and the graphite or metal foil while the specimen is still heated.

21.2 Long time in water (duration)

21.2.1 Wire of construction B (nylon not in place) and A shall have an insulation resistance at 50°C (122°F) or 60°C (140°F) of not less than the number of megohms, based on 1000 conductor feet or based on a conductor kilometer, indicated in Table 21.1 for 60°C (140°F), at any time during immersion under the following conditions: the period of immersion shall be at least 12 weeks when the insulation resistance is higher than 10 megohms based on 1000 conductor feet or is higher than 3 megohms based on a conductor kilometer, and shall be 24 - 36 weeks when the insulation resistance is less than 10 megohms based on 1000 conductor feet and more than the value indicated in Table 21.1 or is less than 3 megohms based on a conductor kilometer and more than the value indicated in Table 21.1. A 48 - 62 Hz rms sinusoidal or nearly sinusoidal potential of 600 V shall be applied to the insulation continuously except while readings are being taken.

21.3 Long time in water (rate of decrease)

21.3.1 Wire of constructions B (nylon not in place) and A shall be such that, during the extended-immersion test at 50°C (122°F) or 60°C (140°F), the maximum decrease in insulation resistance per week (as determined from a curve) for every continuous period of 3 weeks during the latter half of the immersion time specified in 21.2.1 is not more than 4 percent when and while the insulation resistance on the basis of 1000 conductor feet is 10 megohms or more (3 megohms or more based on a conductor kilometer), and is not more than 2 percent when and while the insulation resistance based on 1000 conductor feet is less than 10 and more than the value in Table 21.1 (less than 3 megohms based on a conductor kilometer and more than the value indicated in Table 21.1).

BSR/UL 1569

6.1.5A Cable with 14 - 6 AWG insulated conductors having interlocked armor that is intended for use as a ground path, shall contain a bare aluminum grounding/bonding conductor cabled with the insulated conductors. Cable with interlocked ~~aluminum~~ armor and a binder tape in accordance with 12.1 - 12.5 shall have the grounding/bonding conductor positioned over the binder tape and located in one of the interstices and in direct contact with the interlocked ~~aluminum~~ armor. Cable with interlocked aluminum or zinc-coated steel armor and insulated conductors with a protective covering in accordance with 12.5.1 shall have the bare aluminum grounding/bonding conductor cabled with the insulated conductors and in direct contact with the interlocked armor. See Table 9.1 for appropriate wet and dry ratings. The grounding/bonding conductor shall not be smaller than indicated under the heading "Grounding Conductor" in Table 6.1 (90℃ or 194℉ circuit conductors) or in Table 6.2 (75℃ or 167℉ circuit conductors) and shall not be sectioned. One or more additional copper, aluminum, or copper-clad aluminum grounding conductors may be provided. Each additional grounding conductor shall not be sectioned and shall not be smaller than indicated in Table 6.1 or 6.2 as applicable. If an additional grounding conductor(s) is provided, it (they) shall be insulated in accordance with 40.1 - 40.3. See 6.1.10.

37 Identification of Grounded Circuit Conductor(s)

37.1 In a cable in which only one conductor is intended to be a grounded circuit conductor, the conductor that is intended to be grounded shall be finished to show the color white or gray throughout the entire length and circumference of its outer surface, or shall be identified by three continuous straight or helical, unbroken white stripes on other than green insulation, along its entire length. Straight stripes are to be placed a nominal 120° apart. Where multiple grounded circuit conductors are used in a cable, no more than one shall employ white stripes. Additional conductors intended to be grounded circuit conductors shall be finished white or gray and shall have any one of the following throughout the length of the wire or cable in a color or combination of colors other than, and in contrast with, white, gray, and green (see 36.2):

a) One or more broken (non-continuous) or unbroken straight or helical stripes that contrast with white and gray and are not green ~~or yellow~~.

b) Numbers, letters, words, or a combination thereof, that comply with this standard and are repeated at intervals no longer than 3 inches or 76 mm.

c) A raised tracer.

d) Straight or helical stripes in conjunction with numbers, letters, or words that refer to the corresponding ungrounded circuit conductor color and/or identification, none of which is green.

See 35.2 for details on stripes.