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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: April 21, 2019

APSP (Association of Pool & Spa Professionals)

Supplement

BSR/APSP/ICC/NPC-12, Supplement A-201x, Plastering of Swimming Pools and Spas (supplement to ANSI/APSP/ICC/NPC-12 -2015)

This standard covers the material and application for the plastering of cementitious finish coatings for in-ground swimming pools or other cementitious water-containment vessels. The Sections for consideration are 1.4.4 (addition of a guide - 306.R Guide to Cold Weather Concreting) and Section 1.6.3 (revision of a sentence regarding the temperature during the plastering application).

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Susan J. Hilaski, shilaski@apsp.org

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

Addenda

BSR/ASHRAE Addendum 62.1aa-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

The indoor air quality procedure has a long history going back to the 1981 standard. Weaknesses in the requirements for identifying the contaminants of concern, identifying concentration limits and exposure periods, and specifying the percentage of building occupants to be satisfied with perceived IAQ. Although the percentage of building occupants to be satisfied with perceived IAQ may be specified, and the standard requires that it be measured; this measurement usually would take place after occupancy so is often ignored or omitted. This proposed addendum adds requirements for designing to specific targets. The target design compounds and mixtures are specifically identified.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.1ad-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

Table 6.5 (Minimum Exhaust Rates) lists minimum exhaust rates for certain spaces in which contaminants generation have been deemed high enough that the contaminant cannot be diluted and thus need to be exhausted. However, the standard does not require these spaces to be at any pressure. This proposed addendum adds the requirement for these spaces to be at a negative pressure with respect to adjacent spaces in order to minimize contaminants leakage to adjacent spaces.

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Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.1ae-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

This proposed addendum adds a maximum indoor air dewpoint in mechanically cooled buildings. The 60°F indoor air dewpoint limit avoids the microbial growth problems frequently observed when humid outdoor air infiltrates into buildings. Humidity-related requirements of earlier versions of 62.1 were intended to address both mold growth and comfort concerns by limiting indoor humidity to 65%RH but did not explicitly extend to unoccupied hours when microbial growth often accelerates and because it did not establish a coincident dry bulb temperature and did not limit the mass of water vapor available for surface absorption during periods when cooling is intermittent to conserve energy.

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Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.1af-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

The 2018 FGI (Facilities Guidelines Institute) guideline requires certain outpatient spaces to meet local ventilation codes and not ASHRAE/ASHE Standard 170: Neither one of the two mechanical model codes (IMC and UMC) has ventilation rates for these spaces. The IMC and UMC use ASHRAE Standard 62.1 as basis for their ventilation table. This proposed addendum adds ventilation rates for those spaces in order to bridge the gap with ASHRAE/ASHE Standard 170. It was developed in consultation with FGI in order to understand the activity in each space.

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Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.1ai-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

This proposed addendum removes language published in Addendum q to Standard 62.1-2016. It reinstates the option of using indirect measurement techniques in testing and balancing (TAB) of the ventilation system in startup.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.1aj-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

The current standard is silent on producing ozone within HVAC equipment. In some countries, ozone generators are accepted as air cleaners. Ozone is harmful for health and exposure to ozone creates risk for a variety of symptoms and diseases associated with the respiratory tract. However, there is no consensus on the safe level of ozone. The current state of the science regarding the health effects of ozone strongly suggests that the use of air cleaners that emit ozone by design should not be permitted; the same information and advice is given by the U.S. EPA, among others. There are devices that emit ozone but at the same time reduce concentrations of other harmful contaminants.

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Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.1ak-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

This proposed addendum reduces the leakage of class 2 air into outdoor air from 10% to 5%. Leakage is measured as Exhaust Air Transfer Rate (EATR). From the AHRI-1060 database of air-to-air energy recovery: (1) Of the 670 plate and frame heat exchangers, 70 records show that the plates have exhaust air transfer ratio (EATR). The highest EATR = 3.7; (2) There are 1820 wheel records. 1040 of those are at 5% EATR or below. More than half of the certified products are below the threshold of 5% EATR. Further, fan orientation and pressure design can reduce or eliminate the EATR in the system design.

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Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.1al-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

The current standard has no requirements for accuracy of CO2 sensors used for demand control ventilation. Various research projects show wide variation in accuracy and drift. This addendum proposes to adopt language from the 2013 California Title 24 Section 120.1 (c)4.F.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.1am-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1 -2016)

When Addendum r to 62.1-2016 was published, the footnote to old Table 5.16.1 (Airstreams or Sources) did not transfer to new the Table 6.5.2 (Airstreams or Sources). This proposed addendum reinstates the note into Section 6.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.1an-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

Table 6.2.2.1 (Minimum Ventilation Rates in Breathing Zone) includes educational space types including Classroom (age 9 plus) and Lecture Classroom. The first of these does not have note H assigned and ventilation shutoff is not allowed. Lecture Classroom has note H and ventilation shutoff is allowed. However, for college buildings, it is not clear which of these space types should be assigned to the classroom spaces. This proposed addendum clarifies that college classrooms may use note H and have the ventilation shut off when they are unoccupied.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.1ap-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

This proposed addendum updates some of the edition year and web references to the references listed in Section 9 and Informative Appendix J.

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Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.1aq-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

Many manufacturing occupancies do not use hazardous materials. This proposed addendum changes the air class for those spaces to air class 2. That allows the air to be recirculated to other similar manufacturing areas. Manufacturing spaces using hazardous materials will remain air class 3.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.1ar-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

This proposed addendum modifies language in Informative Appendix E (Acceptable Mass Balance Equations for Use with the IAQ Procedure) to be consistent with the current IAQP. It also clarifies that the equations do not include any potential compounds added by the HVAC system.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.1as-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

This proposed addendum adds a reference to ASHRAE/ASHE Standard 170 and exception to direct users to use the ventilation rates in ASHRAE/ASHE Standard 170 for asepsis and odor control for healthcare spaces listed in ASHRAE/ASHE Standard 170.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.1p-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

The current standard contains exceptions for leakage from energy recovery systems. These exceptions have been misinterpreted and misapplied. The current definition of energy recovery ventilation systems is not used, and the term “energy recovery device” is not defined. The definition is therefore modified.

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Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.1y-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

Since the original publication of Standard 62.1, ASHRAE published Standard 188-2015, Legionellosis: Risk Management for Building Water Systems. This proposed addendum requires advising the owner of the basic requirements of ASHRAE Standard 188.

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Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE Addendum 62.2t-201x, Ventilation and Acceptable Indoor Air Quality in Residential Buildings (addenda to ANSI/ASHRAE Standard 62.2-2016)

This proposed change removes the potential for people to claim they would have installed a balanced system to avoid installing an unbalanced system. It also aligns the maximum airflow requirement that precludes the need to install a fan between new and existing homes.

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Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE/ASHE Addendum 170c-201x, Ventilation of Health Care Facilities (addenda to ANSI/ASHRAE Standard 170-2013)

This proposed addenda provides guidance to users of Standard 170 on how to incorporate air classifications into their design of Standard 170 spaces if they are required to utilize them in conjunction with ASHRAE Standard 62.1.

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Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE/ASHE Addendum 170d-201x, Ventilation of Health Care Facilities (addenda to ANSI/ASHRAE Standard 170-2013)

This proposed addendum adds requirements and language similar to those required in Section 5 (Systems and Equipment) of ASHRAE Standard 62.1. Requirements include: (1) Air intake separation distance table adapted for 170 requirements, (2) Outdoor air verification requirements while operating, (3) Measures to prevent vehicle combustion in parking garages from entering the building, and (4) Air balancing requirements.

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Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

BSR/ASHRAE/ASHE Addendum 170p-201x, Ventilation of Health Care Facilities (addenda to ANSI/ASHRAE/ASHE Standard 170 -2017)

A summary of the original changes: (1) Create a column indicating spaces where unoccupied turndown is acceptable, (2) Incorporate Table 6.4 into Table 7.1 to remove confusion so that filter requirements will be uniformly applied, and (3) Revise space names to align with names appearing in FGI 2014 and indicating the appropriate sections in FGI 2014 where that space is referenced. Based on commentor feedback, the following additional changes are proposed: (1) In Section 7.1(a)(3), the term “humidity” is changed to “design relative humidity”; (2) Some spaces previously marked as not permitting unoccupied turndown are being changed to permit it; (3) Some of the proposed new spaces would not be added to the standard; and (4) Addendum a are proposed changes to the filter column created in this addendum and represents an updated approach to filtration in healthcare facilities.

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Send comments (with copy to psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

IIAR (International Institute of Ammonia Refrigeration)

Revision

BSR/IIAR 5-201x, Startup of Closed-Circuit Ammonia Refrigeration Systems (revision of ANSI/IIAR 5-2013)

This standard specifies minimum requirements for the startup of closed-circuit ammonia refrigeration systems.

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Send comments (with copy to psa@ansi.org) to: tony_lundell@iiar.org

NSF (NSF International)

Revision

BSR/NSF 60-201x (i80r1), Drinking Water Treatment Chemicals - Health Effects (revision of ANSI/NSF 60-2018)

This Standard establishes minimum health effects requirements for the chemicals, the chemical contaminants, and the impurities that are directly added to drinking water from drinking water treatment chemicals. This Standard does not establish performance or taste and odor requirements for drinking water treatment chemicals.

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Send comments (with copy to psa@ansi.org) to: mleslie@nsf.org

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 67-201x, Standard for Safety for Panelboards (revision of ANSI/UL 67-2019)

This proposal covers the addition of alternate requirements for Doors with Formed Hinges as new Paragraph 9.1.12.1.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Derrick Martin, (510) 319-4271, Derrick.L.Martin@ul.com

BSR/UL 197-201x, Standard for Safety for Commercial Electric Cooking Appliances (revision of ANSI/UL 197-2018)

This proposal for UL 197 covers: (1) Use of graphical symbols to transmit a message.

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

BSR/UL 231-201x, Standard for Safety for Power Outlets (revision of ANSI/UL 231-2016)

This proposal covers the addition of requirements for Environmental Considerations for enclosures covered in UL 231.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Derrick Martin, (510) 319-4271, Derrick.L.Martin@ul.com

BSR/UL 514C-201X, Standard for Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers (revision of ANSI/UL 514C-2018)

(1) Exception for configurable conduit bodies.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Joshua Johnson, (919) 549-1053, Joshua.Johnson@ul.com

BSR/UL 1561-201X, Standard for Safety for Dry-Type General Purpose and Power Transformers (revision of ANSI/UL 1561-2015)

(1) Proposal to add Cooper Bus Bar requirements.

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Send comments (with copy to psa@ansi.org) to: Megan Monsen, (847) 664-1292, megan.monsen@ul.com

BSR/UL 2703-201x, Standard for Safety for Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels (revision of ANSI/UL 2703-2015)

This proposal for UL 2703 covers: (1) Additional installation and assembly instructions for locally (separately) sourced components.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Susan Malohn, (847) 664-1725, Susan.P.Malohn@ul.com

Comment Deadline: May 6, 2019

ABYC (American Boat and Yacht Council)

New Standard

BSR/ABYC H-40-201x, Anchoring, Mooring, and Strong Points (new standard)

This standard applies to the design, construction, selection, and installation of fittings and equipment that are attached to or carried on boats for anchoring, mooring, docking, lifting, towing, and trailering of all boats.

Single copy price: $50.00

Obtain an electronic copy from: www.abycinc.org

Send comments (with copy to psa@ansi.org) to: comments@abycinc.org

ASA (ASC S1) (Acoustical Society of America)

Reaffirmation

BSR/ASA S1.17-2014/Part 1 (R201x), Microphone Windscreens - Part 1: Test Procedures for Measurements of Insertion Loss in Still Air (reaffirmation of ANSI/ASA S1.17-2014/Part 1)

Describes test procedures for determining the insertion loss of windscreens mounted on measurement microphones. Insertion loss is determined over a specified frequency range and for still-air conditions in the test facility.

Single copy price: $130.00

Obtain an electronic copy from: asastds@acousticalsociety.org

Order from: Caryn Mennigke, (631) 390-0215, asastds@acousticalsociety.org

Send comments (with copy to psa@ansi.org) to: asastds@acousticalsociety.org

ASA (ASC S12) (Acoustical Society of America)

Reaffirmation

BSR/ASA S12.18-1994 (R201x), Procedures for Outdoor Measurement of Sound Pressure Level (reaffirmation of ANSI/ASA S12.18 -1994 (R2009))

Describes procedures for the measurement of sound pressure levels in the outdoor environment, considering the effects of the ground, refraction due to wind and temperature gradients, and turbulence. Focused on the measurement of sound pressure levels produced by specific sources outdoors. Measured sound pressure levels can be used to calculate sound pressure levels at other distances from the source or to extrapolate to other environmental conditions or to assess compliance with regulation. Describes two methods.

Single copy price: $110.00

Obtain an electronic copy from: asastds@acousticalsociety.org

Order from: Caryn Mennigke, (631) 390-0215, asastds@acousticalsociety.org

Send comments (with copy to psa@ansi.org) to: asastds@acousticalsociety.org

ASABE (American Society of Agricultural and Biological Engineers)

New Standard

BSR/ASABE S648-1 MONYEAR-201x, Agricultural Field Equipment Braking - Part 1: General Requirements (new standard)

The purpose of this part of ASABE S648 is to define terms and establish common requirements, minimum performance criteria and performance test procedures that are common to agricultural field equipment. This part of ASABE S648 provides normative references, defines terms and definitions, and establishes general test procedures for the performance of braking systems used on agricultural field equipment (as defined in ANSI/ASAE S390).

Single copy price: $44.00 (ASABE Members); $65.00 (Non-members)

Obtain an electronic copy from: vangilder@asabe.org

Order from: Carla VanGilder, (269) 932-7015, vangilder@asabe.org

Send comments (with copy to psa@ansi.org) to: vangilder@asabe.org

BSR/ASABE S648-2 MONYEAR-201x, Agricultural Field Equipment Braking - Part 2: Requirements for Agricultural Tractors (new standard)

The purpose of this part of ASABE S648, when used in conjunction with ASABE S648-1, is to establish specific requirements, minimum performance criteria, and performance test procedures that are common to agricultural tractors. This part of ASABE S648 establishes test procedures and performance requirements for braking of agricultural tractors. The requirements and minimum performance criteria are directed to operation and parking of agricultural equipment having a maximum design ground speed greater than 6 km/h (3.7 mile/h) and not exceeding 50km/h (31 mile/h).

Single copy price: $44.00 (ASABE Members); $65.00 (Non-members)

Obtain an electronic copy from: vangilder@asabe.org

Order from: Carla VanGilder, (269) 932-7015, vangilder@asabe.org

Send comments (with copy to psa@ansi.org) to: vangilder@asabe.org

BSR/ASABE S648-3 MONYEAR-201x, Agricultural Field Equipment Braking - Part 3: Requirements for Self-Propelled and Special Self-Propelled Equipment (new standard)

The purpose of this part of ASABE S648, when used in conjunction with ASABE S648-1, is to establish specific requirements, minimum performance criteria, and performance test procedures that are common to self-propelled and special self-propelled agricultural equipment. This part of ASABE S648 establishes test procedures and performance requirements for braking of self-propelled machines (SPM) and special self-propelled machines (SSP). The requirements and minimum performance criteria are directed to operation and parking of agricultural equipment having a maximum design ground speed greater than 6 km/h (3.7 mile/h).

Single copy price: $44.00 (ASABE Members); $65.00 (Non-members)

Obtain an electronic copy from: vangilder@asabe.org

Order from: Carla VanGilder, (269) 932-7015, vangilder@asabe.org

Send comments (with copy to psa@ansi.org) to: vangilder@asabe.org

BSR/ASABE S648-4 MONYEAR-201x, Agricultural Field Equipment Braking - Part 4: Requirements for Towed Equipment (new standard)

The purpose of this part of ASABE S648, when used in conjunction with ASABE S648-1, is to define the minimum requirements related to braking of towed agricultural field equipment referred to as towed vehicles in this standard. Braking includes service braking in transport conditions and parking brake in field conditions. This part of ASABE S648 provides normative references and establishes the minimum requirements related to braking of towed vehicles and towed vehicle trains. These requirements and minimum performance criteria are directed to the operation and parking of towed vehicles and towed vehicle trains having a maximum design ground speed greater than 6 km/h (3.7 mile/h).

Single copy price: $44.00 (ASABE Members); $65.00 (Non-members)

Obtain an electronic copy from: vangilder@asabe.org

Order from: Carla VanGilder, (269) 932-7015, vangilder@asabe.org

Send comments (with copy to psa@ansi.org) to: vangilder@asabe.org

BSR/ASABE S648-5 MONYEAR-201x, Agricultural Field Equipment Braking - Part 5: Requirements for the Interface between Towing Vehicle and Towed Vehicle(s) (new standard)

The purpose of this standard, when used in conjunction with ASABE S648-1, is to define the requirements for interfacing towing vehicle service and parking brakes with towed vehicle(s) with a service brake system, a park brake system, or both. This part of ASABE S648 establishes the minimum requirements for interfacing the service brake system and parking brake system on towing agricultural field equipment with the service brake system and parking brake system on towed agricultural field equipment. The requirements of this part of ASABE S648 are applicable to dual-line hydraulic and pneumatic systems but does not preclude the use of other equivalent systems. These requirements and minimum performance criteria are directed to the operation and parking of agricultural field equipment having a maximum design ground speed greater than 6 km/h (3.7 mile/h).

Single copy price: $44.00 (ASABE Members); $65.00 (Non-members)

Obtain an electronic copy from: vangilder@asabe.org

Order from: Carla VanGilder, (269) 932-7015, vangilder@asabe.org

Send comments (with copy to psa@ansi.org) to: vangilder@asabe.org

ASABE (American Society of Agricultural and Biological Engineers)

Reaffirmation

BSR/ASABE/ISO 500-3-2014 FEB2015 (R201x), Agricultural tractors - Rear-mounted power take-off types 1, 2, 3 and 4 - Part 3: Main PTO dimensions and spline dimensions, location of PTO (reaffirm a national adoption ANSI/ASABE/ISO 500-3:2015)

Specifies manufacturing requirements for, and the location of, rear-mounted power take-offs (PTOs) of types 1, 2, 3, and 4 on agricultural tractors.

Single copy price: $44.00 (ASABE Members); $65.00 (Non-members)

Obtain an electronic copy from: vangilder@asabe.org

Order from: Carla VanGilder, (269) 932-7015, vangilder@asabe.org

Send comments (with copy to psa@ansi.org) to: vangilder@asabe.org

BSR/ASABE/ISO AD500-1:2015 (R201x), Agricultural tractors - Rear-mounted power take-off types 1, 2, 3 and 4 - Part 1: General specifications, safety requirements, dimensions for master shield and clearance zone (reaffirm a national adoption ANSI/ASABE/ISO AD500-1:2015)

Gives general specifications, including speeds, safety requirements, the dimensions for the master shield, overspeed requirements and clearance zones for rear-mounted power take-offs (PTOs) of types 1, 2, 3, and 4 on agricultural tractors with a track setting of more than 1 150 mm (those with a track setting width of 1 150 mm or less are covered in ASABE/ISO 500-2:2004).

Single copy price: $44.00 (ASABE Members); $65.00 (Non-members)

Obtain an electronic copy from: vangilder@asabe.org

Order from: Carla VanGilder, (269) 932-7015, vangilder@asabe.org

Send comments (with copy to psa@ansi.org) to: vangilder@asabe.org

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

Addenda

BSR/ASHRAE Addendum 62.1ac-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

Informative Appendix C (Summary of Selected Air Quality Guidelines) in 62.1-2016 was deleted in a previous addendum. This proposed addendum adds a new Informative Appendix C with content supportive of changes to the Indoor Air Quality Procedure (IAQP).

Single copy price: $35.00

Obtain an electronic copy from: Free download at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

Order from: standards.section@ashrae.org

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BSR/ASHRAE Addendum 62.1ag-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

This proposed addendum replaces the calculation method in current Normative Appendix B2 (Separation of Exhaust Outlets and Outdoor Air Intakes) with a new method based upon ASHRAE RP-1635 (2016). This research was sponsored by ASHRAE TC 4.3. The purpose of this Research Project is to provide a simple, yet accurate procedure for calculating the minimum distance required between the outlet of an exhaust system and the outdoor air intake to a ventilation system to avoid re-entrainment of exhaust gases. The new procedure addresses the technical deficiencies in the simplified equations and tables that are currently in Standard 62.1 -2016 and model building codes.

Single copy price: $35.00

Obtain an electronic copy from: Free download at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

Order from: standards.section@ashrae.org

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BSR/ASHRAE Addendum 62.1ah-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2016)

This proposed addendum clarifies and expands the values of zone air distribution effectiveness (Ez) in Table 6.2.2.1 and adds Normative Appendix X (Zone Air Distribution Effectiveness - Alternate Procedures) to provide a procedure for calculating zone air distribution effectiveness. Notes on Table 6.2.2.1 have also been removed and replaced with definitions or specific requirements within the language of the standard.

Single copy price: $35.00

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BSR/ASHRAE/ASHE Addendum 170b-201x, Ventilation of Health Care Facilities (addenda to ANSI/ASHRAE Standard 170-2013)

This proposed addendum removes several spaces from Tables 7.1, 8.1, and 9.1 based on those spaces being adequately addressed in other standards. The addendum also proposes to modify minimum total air change requirements for several spaces based on the results of CO-RP 3.

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

Revision

BSR/ASHRAE Standard 118.2-201x, Method of Testing for Rating Residential Water Heaters and Residential-Duty Commercial Water Heaters (revision of ANSI/ASHRAE Standard 118.2-2006)

This revision of Standard 118.2-2006 provides test procedures for rating the efficiency and hot water delivery capabilities of directly heated residential water heaters and residential-duty commercial water heaters.

Single copy price: $35.00

Obtain an electronic copy from: http://www.ashrae.org/standards-research--technology/public-review-drafts

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Send comments (with copy to psa@ansi.org) to: http://www.ashrae.org/standards-research--technology/public-review-drafts

BSR/ASHRAE Standard 195-201x, Method of Test for Rating Air Terminal Unit Controls (revision of ANSI/ASHRAE Standard 195 -2013)

This revision of Standard 195-2013 specifies instrumentation and facilities, test installation methods, and procedures for determining the accuracy and stability of airflow control systems for terminal units at various airflow setpoints.

Single copy price: $35.00

Obtain an electronic copy from: http://www.ashrae.org/standards-research--technology/public-review-drafts

Order from: standards.section@ashrae.org

Send comments (with copy to psa@ansi.org) to: http://www.ashrae.org/standards-research--technology/public-review-drafts

ASME (American Society of Mechanical Engineers)

Revision

BSR/ASME B31.5-201x, Refrigeration Piping and Heat Transfer Components (revision of ANSI/ASME B31.5-2016)

Rules for this Code Section have been developed considering the needs for applications that include piping

and heat transfer components for refrigerants and secondary coolants.

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 psa@ansi.org) to: Michelle Pagano □, (212) 591-8399, paganom@asme.org

ASSP (Safety) (American Society of Safety Professionals)

Revision

BSR/ASSP Z359.12-201x, Connecting Components for Personal Fall Arrest Systems (revision and redesignation of ANSI/ASSE Z359.12-2009)

This standard establishes requirements for the performance, design, marking, qualification, test methods, and removal from service of connectors.

Single copy price: $110.00

Obtain an electronic copy from: OMunteanu@ASSP.org

Send comments (with copy to psa@ansi.org) to: OMunteanu@ASSP.org

ATIS (Alliance for Telecommunications Industry Solutions)

Revision

BSR/ATIS 0300094-201x, Trouble Type Codes in Support of ATIS Trouble Administration Standards (revision of ANSI/ATIS 0300094 -2015)

This document contains a canonical listing of Trouble Type Codes to be used in the Electronic Bonding process as specified in ATIS 0300003.

Single copy price: $60.00

Obtain an electronic copy from: cbagwill@atis.org

Send comments (with copy to psa@ansi.org) to: cbagwill@atis.org

BSR/ATIS 0300218-201x, ISDN Management - Data-Link and Network Layers (revision of ANSI ATIS 0300218-2013)

This document covers maintenance of the Layer 2 (data-link-layer) and Layer 3 (network-layer) peer relationships between the exchange termination (ET) and the customer equipment.

Single copy price: $60.00

Obtain an electronic copy from: cbagwill@atis.org

Send comments (with copy to psa@ansi.org) to: cbagwill@atis.org

BSR/ATIS 0300231.01-201x, Digital Subscriber Line (DSL) - Layer 1 In-Service Digital Transmission Performance Monitoring (revision of ANSI ATIS 0300231.01-2013)

This standard provides performance monitoring functions and requirements applicable to DSL digital transmission lines. This standard provides functional requirements to support maintenance and is not meant to be an equipment specification. This standard is one of a set of standards for specific applications utilizing the common criteria as specified in ATIS 0300231.

Single copy price: $30.00

Obtain an electronic copy from: cbagwill@atis.org

Send comments (with copy to psa@ansi.org) to: cbagwill@atis.org

BSR/ATIS 0300231.02-201x, DS1 - Layer 1 In-Service Digital Transmission Performance Monitoring (revision of ANSI ATIS 0300231.02-2013)

This standard provides performance monitoring functions and requirements applicable to DS1 digital transmission signals. This standard provides functional requirements to support maintenance and is not meant to be an equipment specification. This standard is one of a set of standards which are applications utilizing the common criteria as specified in ATIS 0300231.

Single copy price: $145.00

Obtain an electronic copy from: cbagwill@atis.org

Send comments (with copy to psa@ansi.org) to: cbagwill@atis.org

BSR/ATIS 0300231.03-201x, DS3 - Layer 1 In-Service Digital Transmission Performance Monitoring (revision of ANSI ATIS 0300231.03-2013)

This standard provides performance monitoring (PM) functions and requirements applicable to DS3 digital transmission. This standard provides functional requirements to support maintenance and is not meant to be an equipment specification. This standard is one of a set of standards which are applications utilizing the common criteria as specified in ATIS 0300231.

Single copy price: $145.00

Obtain an electronic copy from: cbagwill@atis.org

Send comments (with copy to psa@ansi.org) to: cbagwill@atis.org

BSR/ATIS 0300231.04-201x, SONET - Layer 1 In-Service Digital Transmission Performance Monitoring (revision of ANSI ATIS 0300231.04-2013)

This standard provides performance monitoring (PM) functions and requirements applicable to SONET digital transmission. This standard provides functional requirements to support maintenance and is not meant to be an equipment specification. This standard is one of a set of standards which are applications utilizing the common criteria as specified in ATIS 0300231.

Single copy price: $275.00

Obtain an electronic copy from: cbagwill@atis.org

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BSR/ATIS 0300231-201x, Digital Hierarchy - Layer 1 in-Service Digital Transmission Performance Monitoring (revision of ANSI ATIS 0300231-2013)

This standard provides performance monitoring (PM) functions and requirements applicable to Layer 1 transmission signals for the covered levels of the North American transmission hierarchy. This standard provides functional requirements to support maintenance and is not meant to be an equipment specification.

Single copy price: $110.00

Obtain an electronic copy from: cbagwill@atis.org

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BSR/ATIS 0300245-201x, Directory Services for Telecommunications Management Network (TMN) and Synchronous Optical Network (SONET) (revision of ANSI ATIS 0300245-2013)

This standard specifies the usage of the X.500 Directory, protocols, and services for communications between Directory Users and Directory Servers. These specifications are for use of the Directory in support of management communications within the Telecommunications Management Network (TMN), and for specific technologies, such as Synchronous Optical Network (SONET).

Single copy price: $330.00

Obtain an electronic copy from: cbagwill@atis.org

Send comments (with copy to psa@ansi.org) to: cbagwill@atis.org

BHMA (Builders Hardware Manufacturers Association)

Revision

BSR/BHMA A156.4-201x, Standard for Door Controls - Closers (revision of ANSI/BHMA A156.4-2013)

This Standard contains requirements for door closers surface mounted, concealed in the door, overhead concealed, and concealed in the floor. Also included are pivots for floor closers. Criteria for conformance include cycle, operational, closing force, and finish tests.

Single copy price: $36.00

Obtain an electronic copy from: mtierney@kellencompany.com

Order from: Michael Tierney, (860) 944-4264□, mtierney@kellencompany.com

Send comments (with copy to psa@ansi.org) to: Same

BSR/BHMA A156.11-201x, Standard for Cabinet Locks (revision of ANSI/BHMA A156.11-2014)

This standard establishes requirements for cabinet locks used on doors, drawers, and furniture. Cycle tests, operational tests, strength tests, and finish tests are included.

Single copy price: $36.00

Obtain an electronic copy from: mtierney@kellencompany.com

Order from: Michael Tierney, (860) 944-4264□, mtierney@kellencompany.com

Send comments (with copy to psa@ansi.org) to: Same

CSA (CSA America Standards Inc.)

Reaffirmation

BSR/CSA LC 7-2009 (R201x), Pipe Joint Compound (reaffirmation of ANSI/CSA LC 7-2009 (R2014))

Details test and examination criteria for pipe joint sealing compounds including paste, semi-liquid type and polymeric tape intended for sealing threaded joints on metal piping having NPT tapered threads.

Single copy price: Free

Obtain an electronic copy from: ansicontact@csagroup.org

Order from: David Zimmerman, (216) 524-4990, david.zimmerman@csagroup.org

Send comments (with copy to psa@ansi.org) to: Same

HL7 (Health Level Seven)

Reaffirmation

BSR/HL7 PRIVECLASSSYS, R1-2014 (R201x), HL7 Healthcare Privacy and Security Classification System, Release 1 (reaffirmation of ANSI/HL7 PRIVECLASSSYS, R1-2014)

International standard document describing the use of a Healthcare Privacy and Security Classification System (HCS) suitable for automated labeling and segmentation of protected health care information by access control systems to enforce privacy and security policies.

Single copy price: Free to members and non-members

Obtain an electronic copy from: Karenvan@HL7.org

Order from: Karen Van Hentenryck, (734) 677-7777, Karenvan@HL7.org

Send comments (with copy to psa@ansi.org) to: Same

BSR/HL7 RLUS, R1-2013 (R201x), HL7 Version 3 Standard: Retrieve, Locate, and Update Service (RLUS), Release 1 (reaffirmation of ANSI/HL7 RLUS, R1-2013)

The Retrieve, Locate, and Updating Service (RLUS) Service Functional Model specification provides a set of capabilities through which information systems can access and manage information resources. RLUS realizes, at its core, a basic set of CRUD capabilities plus location for health information resources management and, simply, standardizes the way in which the resources are exposed and consumed independently from the nature of the resources. HL7 Service Functional Models (SFMs) specify the functional requirements of a service.

Single copy price: Free to members and non-members

Obtain an electronic copy from: Karenvan@HL7.org

Order from: Karen Van Hentenryck, (734) 677-7777, Karenvan@HL7.org

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BSR/HL7 V3 IS, R1-2014 (R201x), HL7 Version 3 Standard: Identification Service (IS), Release 1 (reaffirmation of ANSI/HL7 V3 IS, R1-2014)

This service is intended to allow for the resolution of demographics and other identifying characteristics (aka properties aka traits) to a unique identifier. This allows any clinical system that uses the service to maintain a common description for each entity and to manage the entities. Having a standard interface for accessing and maintaining entity identification information allows systems and applications to have a consistent means of indexing data related to an entity.

Single copy price: Free to members and non-members

Obtain an electronic copy from: Karenvan@HL7.org

Order from: Karen Van Hentenryck, (734) 677-7777, Karenvan@HL7.org

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BSR/HL7 V3PA PATREG, R1-2014 (R201x), HL7 Version 3 Standard: Patient Administration; Patient Registry, Release 1 (reaffirmation of ANSI/HL7 V3PA PATREG, R1-2014)

The Patient topic defines messages exchanged with Patient Registries. The Patient information model is not limited to persons; any type of living subject can be registered as a patient. The Patient Registry includes relationships between the patient and healthcare providers who have primary care and/or preferred care responsibility for the patient.

Single copy price: Free to members and non-members

Obtain an electronic copy from: Karenvan@HL7.org

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BSR/HL7 V3 PASS SECURITY LABELSRV, R1-2014 (R201x), HL7 Version 3 Standard: Privacy, Access and Security Services; Security Labeling Service, Release 1 (reaffirmation of ANSI/HL7 V3 PASS SECURITY LABELSRV, R1-2014)

HL7 Security Labeling Service (SLS) extends and refines HL7 Access Control Service by adding two independent services: Privacy and Security Protective Service (PPS), which drills down on the obligations sent with access control decisions; and Security Labeling Service (SLS), which leverages the HCS to define Resource attributes as input to access control decisions and to PPS for fulfilling obligations required for access control enforcement.

Single copy price: Free to members and non-members

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BSR/HL7 V3 PM, R1-2005 (R201x), HL7 Version 3 Standard: Personnel Management, Release 1 (reaffirmation of ANSI/HL7 V3 PM, R1-2005 (R2014))

The Personnel Management spans a variety of clinical-administrative information functions associated with the organizations, individuals, animals, and devices involved in the delivery and support of healthcare services.

Single copy price: Free to members and non-members

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BSR/HL7 V3 RXCMET, R1-201x (R201x), HL7 Version 3 Standard: Pharmacy CMETs, Release 1 (reaffirmation of ANSI/HL7 V3 RXCMET, R1-201x)

CMETs (Common Model Element Types) are a work product produced by a particular work group for expressing a common, useful, and reusable concept. They are generally "consumed", or used by both the producing and other work groups. CMETs are standardized model fragments intended to be building blocks that individual content domains can "include" in their designs. These blocks reduce the effort to produce a domain-specific design and assure that similar content across multiple domains is consistent.

Single copy price: Free to members and non-members

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BSR/HL7 V3 RXMDSEVNT, R2-2014 (R201x), HL7 Version 3 Standard: Pharmacy; Medication Dispense and Supply Event, Release 2 (reaffirmation of ANSI/HL7 V3 RXMDSEVNT, R2-2014)

The Medication Dispense and Supply Event topic contains interactions that can be used to exchange information regarding the processing of prescriptions, usually by a pharmacy, including the pick-up of prescribed medication by the patient or a representative. It also covers cases where medication is sold “over the counter” (i.e., not based on a prescription), but still needs to be recorded in a patient’s medical record and exchange of bulk supplies of medication (not patient specific).

Single copy price: Free to members and non-members

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BSR/HL7 V3 RXMEDCMET, R1-2014 (R201x), HL7 Version 3 Standard: Pharmacy; Medication CMET, Release 1 (reaffirmation of ANSI/HL7 V3 RXMEDCMET, R1-2014)

CMETs (Common Model Element Types) are a work product produced by a particular work group for expressing a common, useful and reusable concept. They are generally "consumed" or used by both the producing and other work groups. CMETs are standardized model fragments intended to be building blocks that individual content domains can "include" in their designs. These blocks reduce the effort to produce a domain-specific design and assure that similar content across multiple domains is consistent.

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BSR/HL7 V3 RXMEDORDER, R2-2014 (R201x), HL7 Version 3 Standard: Pharmacy; Medication Order, Release 2 (reaffirmation of ANSI/HL7 V3 RXMEDORDER, R2-2014)

Covers messaging for Order and Administration to cover institutional settings.

Single copy price: Free to members and non-members

Obtain an electronic copy from: Karenvan@HL7.org

Order from: Karen Van Hentenryck, (734) 677-7777, Karenvan@HL7.org

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BSR/HL7 V3 SC, R2-2014 (R201x), HL7 Version 3 Standard: Scheduling, Release 2 (reaffirmation of ANSI/HL7 V3 SC, R2-2014)

Scheduling supports the simple scenario of a scheduling application sending basic notifications to an auxiliary application. The intent is to establish a standard for the minimum functionality that is useful and comprehensive enough to explore the important concepts. This minimum functionality is notifications of new appointments, revised appointments, canceled appointments, and rescheduled appointments.

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BSR/HL7 V3 SECPRONT, R1-2014 (R201x), HL7 Version 3 Standard: Security and Privacy Ontology, Release 1 (reaffirmation of ANSI/HL7 V3 SECPRONT, R1-2014)

HL7 Security and Privacy Ontology, represented in OWL2, provides standard names, definitions, and common semantics for important concepts shared across the field of healthcare IT security and privacy as modeled in the ontology classes of the Composite Security and Privacy Domain Analysis Model. Thus, it can be a valuable shared information resource that strongly promotes reuse and interoperability of related services.

Single copy price: Free to members and non-members

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HL7 (Health Level Seven)

Withdrawal

ANSI/HL7 IDMP DOSE, R1-2014, Health Informatics - Identification of Medicinal Products - Data Elements and Structures for Unique Identification and Exchange of Regulated Information on Pharmaceutical Dose Forms, Units of Presentations and Routes of Administration (withdrawal of ANSI/HL7 IDMP DOSE, R1-2014)

The proposed standard will provide a mechanism to enable the management and exchange of information uniquely identifying a medicinal product, regardless of where the medicinal product is developed, manufactured, or authorized, to be exchanged between stakeholders. Information enabling the identification of a medicinal product can then be made available as between regulators, and to all other interested stakeholders.

Single copy price: Free to members and non-members

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ANSI/HL7 IDMP MPID, R1-2014, Health Informatics - Identification of Medicinal Products - Data Elements and Structures for Unique Identification and Exchange of Regulated Information, Release 1 (withdrawal of ANSI/HL7 IDMP MPID, R1-2014)

This standard provides a mechanism to enable the management and exchange of information uniquely identifying a medicinal product, regardless of where the medicinal product is developed, manufactured, or authorized, to be exchanged between stakeholders. Information enabling the identification of a medicinal product can then be made available as between regulators, and to all other interested stakeholders.

Single copy price: Free to members and non-members

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Send comments (with copy to psa@ansi.org) to: Same

ANSI/HL7 IDMP PHPID, R1-2014, Health Informatics - Identification of Medicinal Products - Data Elements and Structures for Unique Identification and Exchange of Regulated Pharmaceutical Product Information, Release 1 (withdrawal of ANSI/HL7 IDMP PHPID, R1 -2014)

In the context of the regulation of medicinal products, it is necessary to put in place a mechanism whereby substances and specified substances can be identified uniquely and with certainty in any domain. Such an identification will enable regulatory, pharmacovigilance, and healthcare activities, inter alia, to be undertaken with increased efficiency and certainty, thereby contributing to improved protection of public health.

Single copy price: Free to members and non-members

Obtain an electronic copy from: Karenvan@HL7.org

Order from: Karen Van Hentenryck, (734) 677-7777, Karenvan@HL7.org

Send comments (with copy to psa@ansi.org) to: Same

ANSI/HL7 IDMP SUBSTID, R1-2014, Health Informatics - Identification of Medicinal Products - Data Elements and Structures for Unique Identification and Exchange of Regulated Information on Substances (withdrawal of ANSI/HL7 IDMP SUBSTID, R1-2014)

Substances will be defined by a set of elements necessary for their description and characterization. Specified substances can include additional elements to further define a given material, e.g., based on the physical form, grade, purity, essential processes, or manufacturer. Information enabling the identification of substances and specified substances can then be made available as between regulators, and to all other interested stakeholders.

Single copy price: Free to members and non-members

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ANSI/HL7 IDMP UNITSMEASURE, R1-2014, Health Informatics - Identification of Medicinal Products - Data Elements and Structures for Unique Identification of Units of Measurements, Release 1 (withdrawal of ANSI/HL7 IDMP UNITSMEASURE, R1-2014)

The target is to unambiguously express Units of Measurement for: Description of quantitative composition of medicinal products and packaging; Any Units of Measurement required for adverse drug reaction reporting in the frame of Individual Case Safety Reports (ICSRs).

Single copy price: Free to members and non-members

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ANSI/HL7 V3 MRDACM, R1-2008 (R2014), Health Informatics - Identification of Medicinal Products - Data Elements and Structures for Unique Identification and Exchange of Regulated Information on Pharmaceutical Dose Forms, Units of Presentations and Routes of Administration, Release 1 (withdrawal of ANSI/HL7 V3 MRDACM, R1-2008 (R2014))

This standard provides a mechanism to enable the management and exchange of information uniquely identifying a medicinal product, regardless of where the medicinal product is developed, manufactured or authorized, to be exchanged between stakeholders. Information enabling the identification of a medicinal product can then be made available as between regulators, and to all other interested stakeholders.

Single copy price: Free to members and non-members

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Send comments (with copy to psa@ansi.org) to: Same

IEEE (ASC C63) (Institute of Electrical and Electronics Engineers)

Revision

BSR C63.19-201x, Standard Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids (revision of ANSI C63.19-2011)

The current standard specifies uniform methods of measurement and parametric requirements for the electromagnetic and operational compatibility of hearing aids used with wireless communications devices (WDs) that operate in the 88 MHz to 6 GHz frequency range. A number of developments, relevant to ANSI C63.19, created a need to review the impact and consider the advisability of revising and updating the standard. Among these developments are issues with: (1) Growing importance of VoIP and VoLTE for telephony services; (2) Hearing aid user satisfaction with HAC; (3) Adequacy of volume control; (4) Adequacy of T-Coil reception; (5) Harmonization with corresponding IEC 60118-13 and IEC 60601-2-66 standards; (6) Covering new technologies, particularly at TVWS devices and cellular at 600 MHz, 3.5 GHz, and 5.0 GHz, which may include extending the lower boundary of the frequency range covered; and (7) Use of software-defined radio (SDR) and other new instrumentation in HAC measurements.

Single copy price: $150.00

Obtain an electronic copy from: j.santulli@ieee.org

Send comments (with copy to psa@ansi.org) to: Same

INMM (ASC N14) (Institute of Nuclear Materials Management)

Revision

BSR N14.36-201x, Measurement of Radiation Level and Surface Contamination for Packages and Conveyances (revision of ANSI N14.36-2013)

This standard sets forth methods for radiation and contamination measurement for packaging and transportation of radioactive material by all transportation modes and during all phases of transportation activities. The standard is to provide users with an approach to conformance with regulations that control residual surface contamination and external radiation of shipping packages and conveyances. The standard is meant to be performance based. However, in view of the wide range of operational circumstances exhibited by a diverse industry with varied packaging and transportation operations— ranging from frequent shipment of pharmaceutical products to intermittent shipment of high-activity packages such as spent nuclear fuel—there exists a need to consider the frequency and comprehensiveness of surveys. This standard addresses that need by incorporating procedure-oriented aspects.

Single copy price: Free

Obtain an electronic copy from: N14secretary@gmail.com

Order from: Ronald Natali, 75 North 200 East Richmond, UT 84333

Send comments (with copy to psa@ansi.org) to: N14secretary@gmail.com

ISA (International Society of Automation)

Revision

BSR/ISA 77.14.01-201x, Fossil Fuel Power Plant Steam Turbine Controls (revision of ANSI/ISA 77.14.01-2010)

This standard addresses steam turbine governor controls and overspeed protection of steam turbine generators in fossil power plants. Specifically excluded from consideration are single valve and controlled extraction turbines, mechanical drive turbines, automated startup/shutdown systems, turbine supervisory instrumentation, steam bypass systems, and turbine water induction prevention (TWIP) systems.

Single copy price: $50.00

Obtain an electronic copy from: ebrazda@isa.org

Order from: Eliana Brazda, (919) 990-9228, ebrazda@isa.org

Send comments (with copy to psa@ansi.org) to: Same

BSR/ISA 77.44.01-201x, Fossil Fuel Power Plant - Steam Temperature Controls (revision of ANSI/ISA 77.44.01-2007 (R2013))

The scope of this standard addresses the major steam temperature control subsystems in boilers with steaming capacities of 200,000 lb/hr (25 kg/s) or greater. These subsystems include, but are not limited to, superheat temperature control and reheat temperature control. Specifically excluded from consideration are controls associated with fluidized-bed, stoker-fired furnace combustion units and mud drum desuperheaters.

Single copy price: $60.00

Obtain an electronic copy from: ebrazda@isa.org

Order from: Eliana Brazda, (919) 990-9228, ebrazda@isa.org

Send comments (with copy to psa@ansi.org) to: Same

NEMA (ASC C136) (National Electrical Manufacturers Association)

New Standard

BSR C136.58-201X, Luminaire Four-Pin Extension Module and Receptacle - Physical and Electrical Interchangeability and Testing (new standard)

This document defines the following roadway and area lighting equipment, which may be physically and electrically interchanged to operate within established values: (a) A locking type 4-pin Luminaire Extension Module (LEX-M); (b) A locking type mating 4-pin Luminaire Extension Receptacle (LEX-R); and (c) A Luminaire Extension Cap (LEX-C). The equipment in 1.1 of this standard is primarily intended for outdoor application although it may also be used indoors. The equipment may be mounted at the luminaire bottom, top, or side, as required. The equipment in 1.1 provides mechanical and electrical specification for the interfaces between a LEX-M (sensor/communication module) and LEX-R.

Single copy price: $35.00

Obtain an electronic copy from: David.Richmond@nema.org

Order from: David Richmond, (703) 841-3234, David.Richmond@nema.org

Send comments (with copy to psa@ansi.org) to: Same

NEMA (ASC C18) (National Electrical Manufacturers Association)

Revision

BSR C18.1M Part 2-201x, Standard for Portable Primary Cells and Batteries with Aqueous ElectrolyteSafety Standard (revision of ANSI C18.1M, Part 2-2017)

This American National Standard specifies tests and requirements for portable primary batteries with aqueous electrolyte and zinc anode (non-lithium) to ensure their safe operation under normal use and reasonably foreseeable misuse. For reference, the chemical systems standardized in ANSI C18.1M, Part 1 are: (a) Carbon Zinc (Leclanch and Zinc Chloride types); (b) Alkaline Manganese Dioxide; (c) Silver Oxide; (d) Zinc air; and (e) Nickel Oxy-Hydroxide.

Single copy price: $104.00

Obtain an electronic copy from: khaled.masri@nema.org

Order from: Communications@nema.org

Send comments (with copy to psa@ansi.org) to: khaled.masri@nema.org

BSR C18.3M, Part 2-201x, Portable Lithium Primary Cells and Batteries - Safety Standard (revision of ANSI C18.3M, Part 2-2017)

This American National Standard specifies tests and requirements for portable primary lithium cells and batteries, both the chemical systems and the types covered in ANSI C18.3M, Part 1, to ensure their safe operation under normal use and reasonably foreseeable misuse. For reference, the chemical systems standardized in ANSI C18.3M, Part 1 are: Lithium carbon monofluoride , Lithium manganese dioxide, and Lithium iron disulfide.

Single copy price: $142.00

Obtain an electronic copy from: khaled.masri@nema.org

Order from: Communications@nema.org

Send comments (with copy to psa@ansi.org) to: khaled.masri@nema.org

NEMA (ASC C50) (National Electrical Manufacturers Association)

Revision

BSR/NEMA MG 1-2016 Amendment 1-201x, Motors and Generators (revision of ANSI/NEMA MG 1-2016)

NEMA MG 1 assists users in the proper selection and application of motors and generators, and contains practical information concerning performance, safety, testing, and construction and manufacture of ac and dc motors and generators. Amendments to NEMA MG 1-2016 are proposed.

Single copy price: $125.00

Obtain an electronic copy from: mike.leibowitz@nema.org

Order from: Mike Leibowitz, (703) 841-3264, mike.leibowitz@nema.org

Send comments (with copy to psa@ansi.org) to: same

NFSI (National Floor Safety Institute)

Revision

BSR/NFSI B101.1-201x, Test Method for Measuring the Wet SCOF of Hard-Surface Walkways (revision of ANSI/NFSI B101.1-2009)

This test method specifies the procedures and devices used for both laboratory and field-testing to measure the wet static coefficient of friction (SCOF) of hard-surface walkways.

Single copy price: $59.95

Obtain an electronic copy from: LauraC@nfsi.org

Send comments (with copy to psa@ansi.org) to: Laura Cooper at LauraC@nfsi.org

BSR/NFSI B101.3-201x, Test Method for Measuring the Wet DCOF of Hard Surface Walkways (revision of ANSI/NFSI B101.3-2012)

This test method specifies the procedures and devices used for both laboratory and field testing to measure the wet dynamic coefficient of friction (DCOF) of hard-surface walkways.

Single copy price: $59.95

Obtain an electronic copy from: LauraC@nfsi.org

Send comments (with copy to psa@ansi.org) to: Laura Cooper at LauraC@nfsi.org

NSF (NSF International)

Revision

BSR/NSF 50-201x (i138r5), Equipment and Chemicals for Swimming Pools, Spas, Hot Tubs, and Other Recreational Water Facilities (revision of ANSI/NSF 50-2017)

This Standard covers materials, components, products, equipment, and systems related to public and residential recreational water facility operation.

Single copy price: Free

Obtain an electronic copy from: https://standards.nsf.org/apps/group_public/download.php/47651/50i138r5%20-%20JC%20memo%20and%20ballot.pdf

Send comments (with copy to psa@ansi.org) to: jsnider@nsf.org

BSR/NSF 53-201x (i118r1), Drinking Water Treatment Units - Health Effects (revision of ANSI/NSF 53-2018)

It is the purpose of this Standard to establish minimum requirements for materials, design, and construction, and performance of point-of-use and point-of-entry drinking water treatment systems that are designed to reduce specific health-related contaminants in public or private water supplies. Such systems include point-of-entry drinking water treatment systems used to treat all or part of the water at the inlet to a residential facility or a bottled water production facility, and includes the material and components used in these systems. This Standard also specifies the minimum product literature and labeling information that a manufacturer shall supply to authorized representatives and system owners, as well as the minimum service-related obligations that the manufacturer shall extend to system owners.

Single copy price: Free

Obtain an electronic copy from: https://standards.nsf.org/apps/group_public/download.php/47595/53i118r1%20et%20al%20-%20Lead%20Reduction%20-%20JC%20memo%20&%20ballot.pdf

Send comments (with copy to psa@ansi.org) to: mleslie@nsf.org

BSR/NSF 58-201x (i86r1), Reverse Osmosis Drinking Water Treatment Systems (revision of ANSI/NSF 58-2018)

The purpose of this Standard is to establish minimum requirements for materials, design and construction, and performance of reverse osmosis drinking water treatment systems. This Standard also specifies the minimum product literature that manufacturers shall supply to authorized representatives and owners, as well as the minimum service-related obligations that manufacturers shall extend to system owners.

Single copy price: Free

Obtain an electronic copy from: https://standards.nsf.org/apps/group_public/download.php/47595/53i118r1%20et%20al%20-%20Lead%20Reduction%20-%20JC%20memo%20&%20ballot.pdf

Send comments (with copy to psa@ansi.org) to: mleslie@nsf.org

SCTE (Society of Cable Telecommunications Engineers)

Revision

BSR/SCTE 06-201x, Composite Distortion Measurements (CSO & CTB) (revision of ANSI/SCTE 06-2015)

This document describes a test procedure for the laboratory and production measurement of composite distortion products. There are two types of composite distortions considered: Composite Second Order and Composite Triple Beat. In order to obtain a stable, repeatable measurement, this test procedure describes testing performed with continuous wave (CW) carriers.

Single copy price: $50.00

Obtain an electronic copy from: standards@scte.org

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

Send comments (with copy to psa@ansi.org) to: standards@scte.org

BSR/SCTE 115-201x, Test Method for Reverse Path (Upstream) Intermodulation Using Two Carriers (revision of ANSI/SCTE 115 -2011)

This test procedure defines a method of measurement of intermodulation distortion in the reverse “upstream” path of Cable Telecommunications equipment. This test procedure uses two signal sources (CW sources) at the input of the device under test and uses a spectrum analyzer to measure the discrete second and third intermodulation distortions generated by the device under test.

Single copy price: $50.00

Obtain an electronic copy from: standards@scte.org

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

Send comments (with copy to psa@ansi.org) to: standards@scte.org

Comment Deadline: May 21, 2019

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

ASME (American Society of Mechanical Engineers)

Reaffirmation

BSR B94.21-1968 (R201x), Gear Shaper Cutters (reaffirmation of ANSI B94.21-1968 (R2014))

This standard covers types, sizes, tolerances, marking and nomenclature for ground, finishing-type gear shaper cutters for generating involute spur and helical gears, splines, and serrations. It also covers ground, finishing-type involute herringbone gear shaper cutters for generating herringbone gears.

Single copy price: $35.00

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

For Reaffirmations and Withdrawn standards, please view our catalog at https://www.asme.org/shop/standards

Send comments (with copy to psa@ansi.org) to: Lawrence Chan, (212) 591-7052, chanl4@asme.org

BSR/ASME B5.52-2003 (R201x), Power Presses - General Purpose Single Gap Type (reaffirmation of ANSI/ASME B5.52-2003 (R2014))

The purpose of this Standard is to define and describe gap frame power presses, and their interface, to permit interchangeability of bolsters, dies, and tooling components between presses of comparable type, size, and capacity.

Single copy price: $50.00

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

For Reaffirmations and Withdrawn standards, please view our catalog at https://www.asme.org/shop/standards

Send comments (with copy to psa@ansi.org) to: Lawrence Chan, (212) 591-7052, chanl4@asme.org

BSR/ASME B5.56M-1994 (R201x), Specification and Performance Standard, Power Shears (reaffirm a national adoption ANSI/ASME B5.56M-1994 (R2014))

The purpose of this Standard is to define and describe shear size, capacity, and performance.

Single copy price: $33.00

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

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

Send comments (with copy to psa@ansi.org) to: Lawrence Chan, (212) 591-7052, chanl4@asme.org

BSR/ASME B5.61-2003 (R201x), Power Presses - General Purpose Single Action Straight Side Type (reaffirmation of ANSI/ASME B5.61-2003 (R2014))

This Standard applies to hydraulic and mechanical power presses commonly referred to by the metal-working industry as General-Purpose, Single-Action, Straight-Side Type Power Presses that, by means of dies or tooling attached to the slide and bolster, are used to shear, punch, form, or assemble metal or other materials.

Single copy price: $50.00

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

For Reaffirmations and Withdrawn standards, please view our catalog at https://www.asme.org/shop/standards

Send comments (with copy to psa@ansi.org) to: Lawrence Chan, (212) 591-7052, chanl4@asme.org

BSR/ASME B94.19-1997 (R201x), Milling Cutters and End Mills (reaffirmation of ANSI/ASME B94.19-1997 (R2014))

This Standard covers high-speed steel milling cutters and end mills of one-piece construction as listed in Tables 1 through 62. It also includes general definitions, sizes, and tolerances.

Single copy price: $48.00

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

For Reaffirmations and Withdrawn standards, please view our catalog at https://www.asme.org/shop/standards

Send comments (with copy to psa@ansi.org) to: Lawrence Chan, (212) 591-7052, chanl4@asme.org

BSR/ASME B94.55M-1985 (R201x), Tool Life Testing with Single-Point Turning Tools (reaffirmation of ANSI/ASME B94.55M-1985 (R2014))

This Standard establishes specifications for the following factors of tool life testing with single-point turning tools: workpiece, tool, cutting fluid, cutting conditions, tool wear and tool life, equipment, test procedures, recording and reporting, and presentation of results.

Single copy price: $42.00

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

For Reaffirmations and Withdrawn standards, please view our catalog at https://www.asme.org/shop/standards

Send comments (with copy to psa@ansi.org) to: Lawrence Chan, (212) 591-7052, chanl4@asme.org

Projects Withdrawn from Consideration

In accordance with clause 4.2.1.3.3 Discontinuance of a standards project of the ANSI Essential Requirements, an accredited standards developer may abandon the processing of a proposed new or revised American National Standard or portion thereof if it has followed its accredited procedures. The following projects have been withdrawn accordingly:

AAFS (American Academy of Forensic Sciences)

BSR/ASB Std 057-201x, Standard for the Scope and Sensitivity of Forensic Toxicological Testing (new standard)

Inquiries may be directed to Teresa Ambrosius, (719) 453-1036, tambrosius@aafs.org

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.

ABYC (American Boat and Yacht Council)

Office: 613 Third Street
Suite 10
Annapolis, MD 21403
Contact: Sara Moulton
Phone: (410) 990-4460
E-mail: smoulton@abycinc.org

BSR/ABYC H-40-201x, Anchoring, Mooring, and Strong Points (new standard)

ASA (ASC S1) (Acoustical Society of America)

Office: 1305 Walt Whitman Road
Suite 300
Melville, NY 11747
Contact: Caryn Mennigke
Phone: (631) 390-0215
E-mail: asastds@acousticalsociety.org

BSR/ASA S1.17-2014/Part 1 (R201x), Microphone Windscreens - Part 1: Test Procedures for Measurements of Insertion Loss in Still Air (reaffirmation of ANSI/ASA S1.17-2014/Part 1)

ASA (ASC S12) (Acoustical Society of America)

Office: 1305 Walt Whitman Road
Suite 300
Melville, NY 11747
Contact: Caryn Mennigke
Phone: (631) 390-0215
E-mail: asastds@acousticalsociety.org

BSR/ASA S12.18-1994 (R201x), Procedures for Outdoor Measurement of Sound Pressure Level (reaffirmation of ANSI/ASA S12.18-1994 (R2009))

ASA (ASC S2) (Acoustical Society of America)

Office: 1305 Walt Whitman Road
Suite 300
Melville, NY 11747
Contact: Caryn Mennigke
Phone: (631) 390-0215
E-mail: asastds@acousticalsociety.org

BSR/ASA S2.73 Amd.1-201x/ISO 10819 Amd.1-2019, Mechanical vibration and shock - Hand-arm vibration - Measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand - Amendment 1 (a nationally adopted international standard amendment) (identical national adoption of ISO 10819:2013/Amd 1:2019)

BHMA (Builders Hardware Manufacturers Association)

Office: 355 Lexington Avenue, 15th Floor
15th Floor
New York, NY 10017-6603
Contact: Michael Tierney
Phone: (860) 944-4264
E-mail: mtierney@kellencompany.com

BSR/BHMA A156.4-201x, Standard for Door Controls - Closers (revision of ANSI/BHMA A156.4-2013)

BSR/BHMA A156.11-201x, Standard for Cabinet Locks (revision of ANSI/BHMA A156.11-2014)

ISA (International Society of Automation)

Office: 67 Alexander Drive
Research Triangle Park, NC 27709
Contact: Eliana Brazda
Phone: (919) 990-9228
E-mail: ebrazda@isa.org

BSR/ISA 77.14.01-201x, Fossil Fuel Power Plant Steam Turbine Controls (revision of ANSI/ISA 77.14.01-2010)

BSR/ISA 77.44.01-201x, Fossil Fuel Power Plant - Steam Temperature Controls (revision of ANSI/ISA 77.44.01-2007 (R2013))

NEMA (ASC C136) (National Electrical Manufacturers Association)

Office: 1300 North 17th Street
Suite 900
Rosslyn, VA 22209
Contact: David Richmond
Phone: (703) 841-3234
E-mail: David.Richmond@nema.org

BSR C136.58-201X, Luminaire Four-Pin Extension Module and Receptacle - Physical and Electrical Interchangeability and Testing (new standard)

NEMA (ASC C18) (National Electrical Manufacturers Association)

Office: 1300 North 17th Street
Rosslyn, VA 22209
Contact: Khaled Masri
Phone: (703) 841-3278
E-mail: Khaled.Masri@nema.org

BSR C18.1M Part 2-201x, Standard for Portable Primary Cells and Batteries with Aqueous Electrolyte - Safety Standard (revision of ANSI C18.1M, Part 2-2017)

BSR C18.3M, Part 2-201x, Portable Lithium Primary Cells and Batteries - Safety Standard (revision of ANSI C18.3M, Part 2-2017)

NEMA (ASC C50) (National Electrical Manufacturers Association)

Office: 1300 N 17th St, Suite 900
Rosslyn, VA 22209
Contact: Mike Leibowitz
Phone: (703) 841-3264
E-mail: mike.leibowitz@nema.org

BSR NEMA MG 1-201x, Motors and Generators (new standard)

BSR/NEMA MG 1-2016 Amendment 1-201x, Motors and Generators (revision of ANSI/NEMA MG 1-2016)

NISO (National Information Standards Organization)

Office: 3600 Clipper Mill Road
Suite 302
Baltimore, MD 21211
Contact: Nettie Lagace
Phone: (301) 654-2512
E-mail: nlagace@niso.org

BSR/NISO Z39.103-201x, Standards-Specific Ontology (SSOS) (new standard)

NSF (NSF International)

Office: 789 N. Dixboro Road
Ann Arbor, MI 48105-9723
Contact: Jason Snider
Phone: (734) 418-6660
E-mail: jsnider@nsf.org

BSR/NSF 50-201x (i138r5), Equipment and Chemicals for Swimming Pools, Spas, Hot Tubs, and Other Recreational Water Facilities (revision of ANSI/NSF 50-2017)

BSR/NSF 53-201x (i118r1), Drinking Water Treatment Units - Health Effects (revision of ANSI/NSF 53-2018)

BSR/NSF 58-201x (i86r1), Reverse Osmosis Drinking Water Treatment Systems (revision of ANSI/NSF 58-2018)

BSR/NSF 60-201x (i80r1), Drinking Water Treatment Chemicals - Health Effects (revision of ANSI/NSF 60-2018)

Call for Members (ANS Consensus Bodies)

Call for Committee Members

ASC O1 – Safety Requirements for Woodworking Machinery

Are you interested in contributing to the development and maintenance of valuable industry safety standards? The ASC O1 is currently looking for members in the following categories:

- General Interest
- Government
- Producer
- User

If you are interested in joining the ASC O1, contact WMMA Associate Director Jennifer Miller at jennifer@wmma.org.

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.

APTech (ASC CGATS) (Association for Print Technologies)

Reaffirmation

ANSI/CGATS ISO 12639-2004 (R2019), Graphic technology - Prepress digital data exchange - Tag image file format for image technology (TIFF/IT) (reaffirm a national adoption ANSI/CGATS ISO 12639-2004 (R2013)): 3/14/2019

ASA (ASC S3) (Acoustical Society of America)

Reaffirmation

ANSI/ASA S3.47-2014 (R2019), Specification of Performance Measurement of Hearing Assistance Devices/Systems (reaffirmation of ANSI/ASA S3.47 -2014): 3/14/2019

ASC X9 (Accredited Standards Committee X9, Incorporated)

Reaffirmation

ANSI X9.105-3-2009/ISO 8583-3-2008 (R2019), Financial transaction card originated messages - Interchange message specifications - Part 3: Maintenance Procedures for messages, data elements and code values (reaffirm a national adoption ANSI X9.105-3-2009): 3/19/2019

ASME (American Society of Mechanical Engineers)

New Standard

ANSI/ASME B1.25-2019, Measurement Uncertainty Factors in the Calibration of Screw Thread Gages (new standard): 3/15/2019

Reaffirmation

ANSI/ASME MFC-16-2014 (R2019), Measurement of Fluid Flow in Closed Conduit by Means of Electromagnetic Flowmeters (reaffirmation of ANSI/ASME MFC-16-2014): 3/14/2019

Revision

ANSI/ASME B31.12-2019, Hydrogen Piping and Pipelines (revision of ANSI/ASME B31.12-2014): 3/19/2019

ATIS (Alliance for Telecommunications Industry Solutions)

Reaffirmation

ANSI ATIS 0300219-2013 (R2019), Integrated Services Digital Network (ISDN) Management - Overview and Principles (reaffirmation of ANSI ATIS 0300219-2013): 3/12/2019

CSA (CSA America Standards Inc.)

New Standard

ANSI/CSA 3.21-2019, Standard for Industrial Gas-Fired Natural Draft Heaters for Installation in Non-Hazardous and Hazardous Locations in Oil and Gas Process Applications (new standard): 3/12/2019

Revision

ANSI Z21.54-2019, Gas Hose Connectors for Portable Outdoor Gas-Fired Appliances (same as CSA 8.4) (revision of ANSI Z21.54-2014): 3/14/2019

CTA (Consumer Technology Association)

Reaffirmation

* ANSI/CTA 2006-B-2009 (R2019), Testing & Measurement Methods for Mobile Audio Amplifiers (reaffirmation of ANSI/CTA 2006-B-2009): 3/19/2019

HL7 (Health Level Seven)

New Standard

ANSI/HL7 FHIR® R4 INFRASTRUCTURE R1-2019, HL7 FHIR® R4 Infrastructure, Release 1 (new standard): 3/14/2019

ANSI/HL7 FHIR R4 PATIENT R1-2019, HL7 FHIR R4 Patient, Release 1 (new standard): 3/14/2019

IEEE (Institute of Electrical and Electronics Engineers)

New Standard

ANSI/IEEE 2700-2017, Standard for Sensor Performance Parameter Definitions (new standard): 3/19/2019

ISA (International Society of Automation)

Revision

ANSI/ISA 77.42.01-2019, Fossil Fuel Power Plant Feedwater Control System (revision of ANSI/ISA 77.42.01-1999 (R2011)): 3/12/2019

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

New National Adoption

INCITS/ISO/IEC 19086-3:2017 [2019], Information technology - Cloud computing - Service level agreement (SLA) framework - Part 3: Core conformance requirements (identical national adoption of ISO/IEC 19086 -3:2017): 3/14/2019

ITSDF (Industrial Truck Standards Development Foundation, Inc.)

Revision

ANSI/ITSDF B56.9-2019, Safety Standard for Operator Controlled Industrial Tow Tractors (revision of ANSI/ITSDF B56.9-2012): 3/19/2019

NEMA (National Electrical Manufacturers Association)

Revision

ANSI/NEMA MW 1000-2018, Magnet Wire (revision and redesignation of ANSI/NEMA MW 1000-2016): 3/12/2019

NSF (NSF International)

Revision

ANSI/NSF 3-2019 (i16r1), Commercial Warewashing Equipment (revision of ANSI/NSF 3-2017): 2/26/2019

ANSI/NSF 3-A 14159-1-2019 (i8r1), Hygiene Requirements for the Design of Meat and Poultry Processing Equipment (revision of ANSI/NSF 3-A 14159 -1-2014): 3/19/2019

ANSI/NSF 3-A 14159-2-2019 (i8r1), Hygiene Requirements for the Design of Hand Held Tools Used in Meat and Poultry Processing (revision of ANSI/NSF 3-A 14159-2-2014): 3/19/2019

ANSI/NSF 3-A 14159-3-2019 (i8r1), Hygiene Requirements for the Design of Mechanical Belt Conveyors Used in Meat and Poultry Processing (revision of ANSI/NSF 3-A 14159-3-2014): 3/19/2019

ANSI/NSF 5-2019 (i9r1), Water Heaters, Hot Water Supply Boilers, and Heat Recovery Equipment (revision of ANSI/NSF 5-2016): 3/17/2019

ANSI/NSF 51-2019 (i16r2), Food Equipment Materials (revision of ANSI/NSF 51-2017): 3/11/2019

ANSI/NSF 170-2019 (i21r6), Glossary of Food Equipment Terminology (revision of ANSI/NSF 170-2017): 3/11/2019

ANSI/NSF 184-2019 (i11r2), Residential Dishwashers (revision of ANSI/NSF 184-2014): 3/13/2019

ANSI/NSF 342-2019 (i10r2), Sustainability assessment for wallcovering products (revision of ANSI/NSF 342-2014): 3/17/2019

SAE (SAE International)

New Standard

ANSI/SAE J3097/Z26.1-2019, Standard for Safety Glazing Materials for Glazing Motor Vehicles and Motor Vehicle Equipment Operating on Land Highways - Safety Standard (new standard): 3/21/2019

SCTE (Society of Cable Telecommunications Engineers)

Revision

ANSI/SCTE 125-2018, Hard Line Pin Connector Return Loss (revision of ANSI/SCTE 125-2011): 3/14/2019

UL (Underwriters Laboratories, Inc.)

New Standard

ANSI/UL 180-2019, Standard for Liquid Level Gauges, Level Indicators and Aboveground Piping for Combustible Liquids (new standard): 3/15/2019

ANSI/UL 180-2019a, Standard for Liquid Level Gauges, Level Indicators and Aboveground Piping for Combustible Liquids (new standard): 3/15/2019

ANSI/UL 7008-2019, Standard for Sustainability for Household Dehumidifier Appliances (new standard): 3/12/2019

Revision

ANSI/UL 746A-2019, Standard for Safety for Polymeric Materials - Short Term Property Evaluations (revision of ANSI/UL 746A-2018): 1/28/2019

ANSI/UL 746A-2019a, Standard for Safety for Polymeric Materials - Short Term Property Evaluations (revision of ANSI/UL 746A-2018): 1/28/2019

ANSI/UL 758-2019, Standard for Safety for Appliance Wiring Material (revision of ANSI/UL 758-2017): 3/12/2019

ANSI/UL 844-2019, Standard for Safety for Luminaires for Use in Hazardous (Classified) Locations (revision of ANSI/UL 844-2017): 3/19/2019

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. Use the following Public Document Library url to access PDF & EXCEL reports of approved & proposed ANS: List of Approved and Proposed ANS

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.

ASA (ASC S2) (Acoustical Society of America)

Contact: Caryn Mennigke, (631) 390-0215, asastds@acousticalsociety.org
1305 Walt Whitman Road, Suite 300, Melville, NY 11747

New National Adoption

BSR/ASA S2.73 Amd.1-201x/ISO 10819 Amd.1-2019, Mechanical vibration and shock - Hand-arm vibration - Measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand - Amendment 1 (a nationally adopted international standard amendment) (identical national adoption of ISO 10819:2013/Amd 1:2019)

Stakeholders: Industrial and safety engineering, government regulators, medical.

Project Need: An amendment recently was published to an ISO document that has been nationally adopted as an American National Standard. The adoption of the amendment is necessary to keep the American National Standard in line with the international standard.

The baseline nationally adopted international standard specifies a method for laboratory measurement, data analysis, and reporting of the vibration transmissibility of a glove with a vibration-reducing material that covers the palm and the fingers and thumb of the hand, in terms of vibration transmitted from a handle through a glove in the 1/3-octave frequency bands with center frequencies of 25 Hz to 1,250 Hz. The procedure can also be used to measure the vibration transmissibility of a material that is used to cover a handle of a machine. This amendment was recently published to supplement the baseline document, so the national adoption of the amendment is also required.

ASTM (ASTM International)

Contact: Laura Klineburger, (610) 832-9696, accreditation@astm.org
100 Barr Harbor Drive, West Conshohocken, PA 19428-2959

New Standard

BSR/ASTM F2797-201x, Reinstatement of Test Method for Evaluating Edge Cleaning Effectiveness of Vacuum Cleaners (new standard)

Stakeholders: Vacuum Cleaners industry.

Project Need: This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

This test procedure provides a quantitative laboratory method for determining the edge-cleaning effectiveness of a vacuum cleaner along walls and baseboards. This test method is applicable to household and commercial types of upright, canister, combination, stick, and hand-held vacuum cleaners.

BSR/ASTM WK67401-201x, New Guide for Inclusion of Cyber Risks into Maritime Safety Management Systems (new standard)

Stakeholders: Computer Applications industry.

Project Need: The need to protect information of any kind has grown proportionally with the expansion of information technology and the reliance of organizations on the use of information technology in the course of their business activities.

This ASTM Guideline document is designed to provide the maritime industry guidance, information, and options for incorporating cyber elements into Safety Management Systems (SMS) in accordance with International Safety Management (ISM) Code and other national (U.S.) and international requirements.

CSA (CSA America Standards Inc.)

Contact: David Zimmerman, (216) 524-4990, david.zimmerman@csagroup.org
8501 E. Pleasant Valley Road, Cleveland, OH 44131

New Standard

BSR/CSA C22.2 No. 184.2-201x, Solid-state controls for lighting systems (SSCLS) (new standard)

Stakeholders: Manufacturers, users, certification agencies, regulators.

Project Need: To provide safety requirements for solid-state controls for lighting systems; currently, there are no standards to cover those products.

This Standard applies to permanently connected multi-circuit solid-state lighting controls rated at 600 V and less, 50 or 60 Hz, single or three phase, with or without an integral switching (disconnecting) devices, designed to be used as standalone systems controlling (a) incandescent lamps; (b) fluorescent, compact florescent, and electric discharge lamps; (c) HID (pilot duty) and electronic ballasts; and (d) LED and OLED lights, and intended for installation in accordance with the Rules of CSA C22.1, Canadian Electrical Code, Part I and the National Electrical Code. This Standard applies to ac- and dc-rated controls for which the load rating does not exceed 20 A and 2 hp per circuit at a maximum 600 V. These SSCLS products may include phase dimmers, solid-state timers, relay modules, and other load-switching devices. These products may also include convenience receptacles, mechanical switches and other wiring devices on separate circuits.

ESTA (Entertainment Services and Technology Association)

Contact: Richard Nix, (212) 244-1505, standards@esta.org
630 Ninth Avenue, Suite 609, New York, NY 10036-3748

New Standard

BSR/E1.67-201x, Design, Inspection, Maintenance, Selection, and Use of Hand-Operated Chain- and Lever Hoists for the Entertainment Industry (new standard)

Stakeholders: Entertainment industry workers, performers, audience members, and hoist equipment manufacturers.

Project Need: These type of hoists are widely used in the entertainment industry to lift and sometimes suspend loads overhead. Currently, ASME standards B30.16 and B30.21, which cover these topics for hand-operated chain and lever hoists, are not relevant to how these hoists are used in the entertainment industry. Having a standard covering these type of hoists as they are specifically used in the entertainment industry will help to make the industry safer by documenting the practices that are widely acceptable and agreed-upon by the entertainment industry users.

This standard covers the design, inspection, maintenance, selection, and use of serially manufactured, hand-operated chain and lever hoists, having capacity of 2 tons or less and used in the entertainment industry. This standard does not cover attachment to the load or to the overhead structure.

HL7 (Health Level Seven)

Contact: Karen Van Hentenryck, (734) 677-7777, Karenvan@HL7.org
3300 Washtenaw Avenue, Suite 227, Ann Arbor, MI 48104

Withdrawal

ANSI/HL7 V3ITSHDATA RF, R1-2014, HL7 Version 3 Standard: hData Record Format, Release 1 (withdrawal of ANSI/HL7 V3ITSHDATA RF, R1-2014)

Stakeholders: Healthcare.

Project Need: For some health industry stakeholders, some xml-based content exchange models are more complex than required or perceived as difficult to implement. hData provides a simpler framework for the exchange of that same semantic content.

The hData Record Format defines a machine-readable file format (root.xml) that describes the resources located at an hData service endpoint and the URLs needed to access them through RESTful services. The root file is accessed by clients to determine the capabilities of the service endpoint, and its conformance to one or more predefined profiles. The hData Record Format, together with the OMG hData RESTful Transport, defines an implementable solution for exchanging health resources, including, but not limited to, FHIR resources.

HPS (ASC N43) (Health Physics Society)

Contact: Nancy Johnson, (703) 790-1745, nanjohns@verizon.net
1313 Dolley Madison Blvd #402, McLean, VA 22101

Revision

BSR N43.10-201x, Safe Design and Use of Panoramic, Wet Source Storage Gamma Irradiators (Category IV) and Dry Source Storage Gamma Irradiators (Category II) (revision of ANSI N43.10-2001 (R2010))

Stakeholders: Irradiator designers, manufacturers, end-users, regulators.

Project Need: It is essential to establish basic criteria to ensure a high standard of radiation safety in the design and use of irradiators.

The standard establishes the criteria to be used in the proper design, fabrication, installation, use, and maintenance of panoramic wet-source storage gamma irradiators and dry-source storage gamma irradiators that contain sealed gamma-emitting sources for the irradiation of objects or materials.

IEST (Institute of Environmental Sciences and Technology)

Contact: Jennifer Sklena, (847) 981-0100, jsklena@iest.org
1827 Walden Office Square, Suite 400, Schaumburg, IL 60173

New National Adoption

BSR/IEST/ISO 14644-16-201x, Cleanrooms and associated controlled environments - Part 16: Energy efficiency in cleanrooms and clean air devices (identical national adoption of ISO 14644-16:2019)

Stakeholders: Anyone involved in the Cleanroom industry, including equipment manufacturers and users.

Project Need: Although varying greatly in function and size, the energy consumption of cleanrooms can be over 10 times higher than that for offices of similar size. A considerable amount of energy is required to provide large amounts of filtered and conditioned air to achieve specific levels of air cleanliness. Additional energy is also used to achieve temperature and relative humidity control for processes in the cleanroom, for personnel comfort and to achieve the requisite pressurization of the cleanroom space. There is therefore significant potential for energy saving by diligent design in the installation of new cleanrooms, and by retrofit improvements and upgrades to existing facilities.

This document gives guidance and recommendations for optimizing energy usage and maintaining energy efficiency in new and existing cleanrooms, clean zones, and separative devices. The standard provides guidance for the design, construction, commissioning, and operation of cleanrooms. It covers all cleanroom-specific features and can be used in different areas to optimize energy use in electronic, aerospace, nuclear, pharmaceutical, hospital, medical device, food industries, and other clean air applications. It also introduces the concept of benchmarking for the performance assessment and comparison of cleanroom energy efficiencies, whilst maintaining performance levels to 14644 requirements.

NEMA (ASC C29) (National Electrical Manufacturers Association)

Contact: Gerard Winstanley, (703) 841-3231, Gerard.Winstanley@Nema.org
1300 North 17th Street, Suite 900, Rosslyn, VA 22209

Revision

BSR C29.12-201x, Composite Insulators - Transmission Suspension Type (revision of ANSI C29.12-2013)

Stakeholders: Utilities, consulting engineers, transmission and distribution, high-voltage insulator manufacturers.

Project Need: Revision of standard to current industry practices.

This standard covers composite suspension (tension) insulators with a minimum section length of 46 inches (1168.4 mm) made of a fiberglass-reinforced resin matrix core, polymer-material weathersheds, and metal end fittings intended for use on overhead transmission lines for electric power systems. Mechanical and electrical performance levels specified in this standard are requirements for new insulators.

NISO (National Information Standards Organization)

Contact: Nettie Lagace, (301) 654-2512, nlagace@niso.org
3600 Clipper Mill Road, Suite 302, Baltimore, MD 21211

New Standard

BSR/NISO Z39.103-201x, Standards-Specific Ontology (SSOS) (new standard)

Stakeholders: Standards publishers, standards product owners, publishing suppliers, software developers, libraries.

Project Need: To develop and standardize a high-level standards ontology that describes a limited set of core concepts and relationships for standards.

To develop and standardize a high-level standards ontology that describes a limited set of core concepts and relationships, beginning with a component to define the standards' lifecycle states. This work will facilitate use; create deeper, more consistent discovery/navigation; and set a foundation for other semantic application, such as linked data, in the standards ecosystem.

UL (Underwriters Laboratories, Inc.)

Contact: Megan Monsen, (847) 664-1292, megan.monsen@ul.com
333 Pfingsten Road, Northbrook, IL 60062

New Standard

BSR/UL 510-201X, Standard for Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape (new standard)

Stakeholders: Manufacturers of polyvinyl chloride, polyethylene, and rubber Insulating tape, AHJs, supply chain, and users of insulating tape.

Project Need: Create a new American National Standard.

In the US, this standard covers the following: (a) Thermoplastic and rubber tapes for use as electrical insulation at not more than 600 V and at 80°C (176°F) and lower temperatures on joints and splices in wires and cables in accordance with NFPA 70. It is intended that rubber tape on a joint or splice be mechanically protected by a covering such as friction tape. Thermoplastic tape is acceptable without the additional mechanical protection; and (b) The characteristic constituent of the thermoplastic tape covered in this Standard is either PVC (polyvinyl chloride) or a copolymer of vinyl chloride and vinyl acetate), or PE (thermoplastic polyethylene). In Canada, this standard covers the following: (a) Thermoplastic and rubber tapes for use as electrical insulation at not more than 600 V and 80°C (176°F) and lower temperatures on joints and splices in wire and cables in accordance with CSA C22.1. It is intended that rubber tape on a joint or splice be mechanically protected by a covering such as friction tape. Thermoplastic tape is acceptable without the additional mechanical protection; and (b) The characteristic constituent of the thermoplastic tape covered in this Standard is PE (thermoplastic polyethylene). Requirements for PVC tape are covered by CSA C22.2 No. 197.

BSR/UL 510A-201X, Standard for Safety for Component Tapes (new standard)

Stakeholders: Manufacturers of component tapes, supply chain, and users of component tapes.

Project Need: Create a new American National Standard.

This standard covers adhesive- and non-adhesive-backed tapes intended for use with finished electromechanical products. Results obtained provide data with respect to the physical, electrical, flammability, thermal, adhesion, and other properties of the tapes under consideration and are intended to provide guidance for tape manufacturers, end-product manufacturers, safety engineers, and other interested parties. This standard also covers tapes which have only been subjected to thickness and flammability tests in accordance with Thickness, Section 9 and Flame Test, Section 20, respectively. Tapes subjected only to flammability tests in accordance with Section 20 may employ a conductive backing. This standard does not cover the following: (a) In the US, adhesive-coated poly(vinyl chloride) (PVC), adhesive-coated polyethylene (PE), and rubber tapes intended for use on joints and splices in wires and cables in accordance with NFPA 70 at not more than 600 V and 80°C (176°F). These types of tapes are covered by UL 510; (b) In Canada, adhesive-coated polyethylene (PE) and rubber tapes intended for use on joints and splices in wire and cables in accordance with CSA C22.1 at not more than 600 V and 80°C (176°F). These tapes are covered by UL 510; (c) In Canada, adhesive-coated poly(vinyl chloride) (PVC) tape, intended for use on joints and splices in wires and cables in accordance with CSA C22.1 at a maximum temperature of 60°C (140°F), 80°C (176°F), 90°C (194°F), or 105°C (221°F) and having voltage ratings up to 1,000 V. These types of tapes are covered by CSA C22.2 No. 197.

American National Standards Maintained Under Continuous Maintenance

The ANSI Essential Requirements: Due Process Requirements for American National Standards provides 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)**
- **AARST (American Association of Radon Scientists and Technologists)**
- **AGA (American Gas Association)**
- **AGSC-AGRSS (Auto Glass Safety Council)**
- **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)**
- **GBI (Green Building Initiative)**
- **HL7 (Health Level Seven)**
- **IES (Illuminating Engineering Society)**
- **ITI (InterNational Committee for Information Technology Standards)**
- **MHI (Material Handling Industry)**
- **NAHBRC (NAHB Research Center, Inc.)**
- **NBBPVI (National Board of Boiler and Pressure Vessel Inspectors)**
- **NCPDP (National Council for Prescription Drug Programs)**
- **NEMA (National Electrical Manufacturers Association)**
- **NISO (National Information Standards Organization)**
- **NSF (NSF International)**
- **PRCA (Professional Ropes Course Association)**
- **RESNET (Residential Energy Services Network, Inc.)**
- **SAE (SAE International)**
- **TCNA (Tile Council of North America)**
- **TIA (Telecommunications Industry Association)**
- **UL (Underwriters Laboratories, Inc.)**

To obtain additional information with regard to these standards, including contact information at the ANSI Accredited Standards Developer, please visit ANSI Online at www.ansi.org/asd, select “Standards Activities,” click on “Public Review and Comment” and “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.

ABYC
American Boat and Yacht Council

613 Third Street
Suite 10
Annapolis, MD 21403
Phone: (410) 990-4460

Web: www.abycinc.org

APSP
Association of Pool & Spa Professionals

2111 Eisenhower Ave.
Suite 500
Alexandria, VA 22314
Phone: (703) 838-0083 EXT 150

Web: www.apsp.org

APTech (ASC CGATS)
Association for Print Technologies

1899 Preston White Drive
Reston, VA 20191
Phone: (703) 264-7200

Web: www.printtechnologies.org

ASA (ASC S1)
Acoustical Society of America

1305 Walt Whitman Road
Suite 300
Melville, NY 11747
Phone: (631) 390-0215

Web: www.acousticalsociety.org

ASA (ASC S12)
Acoustical Society of America

1305 Walt Whitman Road
Suite 300
Melville, NY 11747
Phone: (631) 390-0215

Web: www.acousticalsociety.org

ASA (ASC S2)
Acoustical Society of America

1305 Walt Whitman Road
Suite 300
Melville, NY 11747
Phone: (631) 390-0215

Web: www.acousticalsociety.org

ASA (ASC S3)
Acoustical Society of America

1305 Walt Whitman Road
Suite 300
Melville, NY 11747
Phone: (631) 390-0215

Web: www.acousticalsociety.org

ASABE
American Society of Agricultural and Biological Engineers

2950 Niles Road
Saint Joseph, MI 49085
Phone: (269) 932-7015

Web: www.asabe.org

ASC X9
Accredited Standards Committee X9, Incorporated

275 West Street
Suite 107
Annapolis, MD 21401
Phone: (410) 267-7707

Web: www.x9.org

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

1791 Tullie Circle, NE
Atlanta, GA 30329
Phone: (678) 539-1214

Web: www.ashrae.org

ASME
American Society of Mechanical Engineers

Two Park Avenue
New York, NY 10016-5990
Phone: (212) 591-8521

Web: www.asme.org

ASSP (Safety)
American Society of Safety Professionals

520 N. Northwest Highway
Park Ridge, IL 60068
Phone: (847) 699-2929

Web: www.assp.org

ASTM
ASTM International

100 Barr Harbor Drive
West Conshohocken, PA 19428-2959
Phone: (610) 832-9696

Web: www.astm.org

ATIS
Alliance for Telecommunications Industry Solutions

1200 G Street NW
Suite 500
Washington, DC 20005
Phone: (202) 628-6380

Web: www.atis.org

BHMA
Builders Hardware Manufacturers Association

355 Lexington Avenue, 15th Floor
15th Floor
New York, NY 10017-6603
Phone: (860) 944-4264

Web: www.buildershardware.com

CSA
CSA America Standards Inc.

8501 E. Pleasant Valley Road
Cleveland, OH 44131
Phone: (216) 524-4990

Web: www.csagroup.org

CTA
Consumer Technology Association

1919 South Eads Street
Arlington, VA 22202
Phone: (703) 907-7697

Web: www.cta.tech

ESTA
Entertainment Services and Technology Association

630 Ninth Avenue
Suite 609
New York, NY 10036-3748
Phone: (212) 244-1505

Web: www.esta.org

HL7
Health Level Seven

3300 Washtenaw Avenue
Suite 227
Ann Arbor, MI 48104
Phone: (734) 677-7777

Web: www.hl7.org

HPS (ASC N43)
Health Physics Society

1313 Dolley Madison Blvd #402
McLean, VA 22101
Phone: (703) 790-1745

Web: www.hps.org

IEEE
Institute of Electrical and Electronics Engineers

445 Hoes Lane
Piscataway, NJ 08854
Phone: (732) 562-3854

Web: www.ieee.org

IEEE (ASC C63)
Institute of Electrical and Electronics Engineers

445 Hoes Lane
Piscataway, NJ 08854
Phone: (732) 562-3874

Web: www.ieee.org

IEST
Institute of Environmental Sciences and Technology

1827 Walden Office Square
Suite 400
Schaumburg, IL 60173
Phone: (847) 981-0100

Web: www.iest.org

IIAR
International Institute of Ammonia Refrigeration

1001 North Fairfax Street
Alexandria, VA 22314
Phone: (703) 312-4200

Web: www.iiar.org

INMM (ASC N14)
Institute of Nuclear Materials Management

P.O. Box 2008, MS 6495
Oak Ridge National Laboratory
Oak Ridge, TN 37831-6495
Phone: (435) 258-3730

Web: www.inmm.org

ISA (Organization)
International Society of Automation

67 Alexander Drive
Research Triangle Park, NC 27709
Phone: (919) 990-9228

Web: www.isa.org

ITI (INCITS)
InterNational Committee for Information Technology Standards

1101 K Street NW
Suite 610
Washington, DC 20005-3922
Phone: (202) 737-8888

Web: www.incits.org

ITSDF
Industrial Truck Standards Development Foundation, Inc.

1750 K Street NW
Suite 460
Washington, DC 20006
Phone: (202) 296-9880

Web: www.indtrk.org

NEMA (ASC C136)
National Electrical Manufacturers Association

1300 North 17th Street
Suite 900
Rosslyn, VA 22209
Phone: (703) 841-3234

Web: www.nema.org

NEMA (ASC C29)
National Electrical Manufacturers Association

1300 North 17th Street
Suite 900
Rosslyn, VA 22209
Phone: (703) 841-3231

Web: www.nema.org

NEMA (ASC C50)
National Electrical Manufacturers Association

1300 N 17th St, Suite 900
Rosslyn, VA 22209
Phone: (703) 841-3264

Web: www.nema.org

NEMA (ASC C8)
National Electrical Manufacturers Association

1300 North 17th Street
Rosslyn, VA 22209
Phone: (703) 841-3278

Web: www.nema.org

NEMA (Canvass)
National Electrical Manufacturers Association

1300 North 17th Street
Suite 900
Rosslyn, VA 22209
Phone: (703) 841-3264

Web: www.nema.org

NFSI
National Floor Safety Institute

P.O. Box 92607
Southlake, TX 76092
Phone: (817) 749-1700 ext. 104

Web: www.nfsi.org

NISO
National Information Standards Organization

3600 Clipper Mill Road
Suite 302
Baltimore, MD 21211
Phone: (301) 654-2512

Web: www.niso.org

NSF
NSF International

789 N. Dixboro Road
Ann Arbor, MI 48105-9723
Phone: (734) 418-6660

Web: www.nsf.org

SAE
SAE International

755 W. Big Beaver Rd., Suite 1600
Troy, MI 48084
Phone: (248) 273-2457

Web: www.sae.org

SCTE
Society of Cable Telecommunications Engineers

140 Philips Road
Exton, PA 19341-1318
Phone: (484) 252-2330

Web: www.scte.org

UL
Underwriters Laboratories, Inc.

333 Pfingsten Road
Northbrook, IL 60062
Phone: (847) 664-1292

Web: www.ul.com

ISO & IEC Draft International Standards

This section lists proposed standards that the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) are 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 and IEC 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 ANSI's ISO Team (isot@ansi.org); comments on ISO documents must be submitted electronically in the approved ISO template and as a Word document as other formats will not be accepted.

Those regarding IEC documents should be sent to Tony Zertuche, General Secretary, USNC/IEC, at ANSI's New York offices (tzertuche@ansi.org). The final date for offering comments is listed after each draft.

Ordering Instructions

ISO and IEC Drafts can be made available by contacting ANSI's Customer Service department. Please e-mail your request for an ISO or IEC 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.

ISO Standards

ACOUSTICS (TC 43)

ISO/DIS 12999-1, Acoustics - Determination and application of measurement uncertainties in building acoustics - Part 1: Sound insulation - 4/4/2019, $82.00

ADDITIVE MANUFACTURING (TC 261)

ISO/ASTM DIS 52941, Additive manufacturing - System performance and reliability - Standard test method for acceptance of powder-bed fusion machines for metallic materials for aerospace application - 6/3/2019, $58.00

ISO/ASTM DIS 52942, Additive manufacturing - Qualification principles - Qualifying machine operators of metal powder bed fusion machines and equipment used in aerospace applications - 6/3/2019, $62.00

AGRICULTURAL FOOD PRODUCTS (TC 34)

ISO 6887-3/DAmd1, Microbiology of the food chain - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 3: Specific rules for the preparation of fish and fishery products - Amendment 1: Sample preparation for raw marine gastropods - 3/31/2019, $29.00

BANKING AND RELATED FINANCIAL SERVICES (TC 68)

ISO/DIS 10962, Securities and related financial instruments - Classification of financial instruments (CFI code) - 4/4/2019, $146.00

BIOLOGICAL EVALUATION OF MEDICAL AND DENTAL MATERIALS AND DEVICES (TC 194)

ISO/DIS 10993-12, Biological evaluation of medical devices - Part 12: Sample preparation and reference materials - 6/1/2019, $93.00

ISO/DIS 10993-23, Biological evaluation of medical devices - Part 23: Tests for irritation - 6/1/2019, $134.00

BIOTECHNOLOGY (TC 276)

ISO/DIS 21899, Biotechnology - Biobanking - General requirements for the validation and verification of processing methods for biological material in biobanks - 3/31/2019, $77.00

CLINICAL LABORATORY TESTING AND IN VITRO DIAGNOSTIC TEST SYSTEMS (TC 212)

ISO/DIS 21151, In vitro diagnostic medical devices - Measurement of quantities in samples of biological origin - Requirements for international harmonization protocols establishing metrological traceability of values assigned to calibrators and human samples - 4/6/2019, $71.00

CONCRETE, REINFORCED CONCRETE AND PRE-STRESSED CONCRETE (TC 71)

ISO/DIS 14484, Performance guidelines for design of concrete structures using fibre-reinforced polymer (FRP) materials - 6/7/2019, $46.00

CONTROL AND SAFETY DEVICES FOR NON INDUSTRIAL GAS-FIRED APPLIANCES AND SYSTEMS (TC 161)

ISO 23551-8/DAmd2, Safety and control devices for gas burners and gas-burning appliances - Particular requirements - Part 8: Multifunctional controls - Amendment 2: Optional requirements for components of burner control systems - 6/7/2019, $58.00

CORROSION OF METALS AND ALLOYS (TC 156)

ISO/DIS 11845, Corrosion of metals and alloys - General principles for corrosion testing - 6/7/2019, $53.00

DENTISTRY (TC 106)

ISO/DIS 1942, Dentistry - Vocabulary - 4/1/2019, $107.00

ISO/DIS 9997, Dentistry - Cartridge syringes - 5/27/2019, $53.00

ISO/DIS 20888, Dentistry - Terminology for forensic oro-dental data - 5/27/2019, $125.00

ISO/DIS 22052, Dentistry - Central compressed air source equipment - 6/6/2019, $88.00

ISO/DIS 22569, Dentistry - Multifunction handpieces - 6/3/2019, $77.00

EARTH-MOVING MACHINERY (TC 127)

ISO/DIS 10968, Earth-moving machinery - Operators controls - 6/1/2019, $98.00

ISO/DIS 19014-4, Earth-moving machinery - Functional safety - Part 4: Design and evaluation of software and data transmission for safety-related parts of the control system - 6/3/2019, $107.00

ENERGY MANAGEMENT AND ENERGY SAVINGS (TC 301)

ISO/DIS 50049, Calculation methods for energy efficiency and energy consumption variations at country, region and city levels: relation to energy savings and other factors - 5/26/2019, $125.00

ENVIRONMENTAL MANAGEMENT (TC 207)

ISO/DIS 14016, Environmental management - Guidelines on assurance of environmental reports - 4/8/2019, $88.00

ISO/DIS 14002-1, Environmental management systems - Guidelines for using ISO 14001 to address environmental aspects and conditions within an environmental topic area - Part 1: General - 3/31/2019, $58.00

EQUIPMENT FOR FIRE PROTECTION AND FIRE FIGHTING (TC 21)

ISO 6183/DAmd2, Fire protection equipment - Carbon dioxide extinguishing systems for use on premises - Design and installation - Amendment 2 - 6/6/2019, $33.00

FERROUS METAL PIPES AND METALLIC FITTINGS (TC 5)

ISO/DIS 7369, Pipework - Metal hoses and hose assemblies - Vocabulary - 5/30/2019, $46.00

FIRE SAFETY (TC 92)

ISO/DIS 13571-1, Life-threatening components of fire - Part 1: Guidelines for the estimation of time to compromised tenability in fires - 3/31/2019, $112.00

FLOOR COVERINGS (TC 219)

ISO/DIS 2551, Textile floor coverings and textile floor coverings in tile form - Determination of dimensional changes due to the effects of varied water and heat conditions and distortion out of plane - 6/7/2019, $40.00

ISO/DIS 12951, Textile floor coverings - Determination of mass loss, fibre bind and stair nosing appearance change using the Lisson Tretrad machine - 6/7/2019, $62.00

FLUID POWER SYSTEMS (TC 131)

ISO/DIS 19879, Metallic tube connections for fluid power and general use - Test methods for hydraulic fluid power connections - 4/8/2019, $77.00

FOOTWEAR (TC 216)

ISO/DIS 19577, Footwear - Critical substances potentially present in footwear and footwear components - Determination of Nitrosamines - 4/6/2019, $53.00

GAS CYLINDERS (TC 58)

ISO/DIS 11114-1, Gas cylinders - Compatibility of cylinder and valve materials with gas content - Part 1: Metallic materials - 5/24/2019, $119.00

GAS TURBINES (TC 192)

ISO/DIS 21905, Gas turbine exhaust systems with or without waste heat recovery - 3/31/2019, $165.00

GEOGRAPHIC INFORMATION/GEOMATICS (TC 211)

ISO/DIS 19131, Geographic information - Data product specifications - 5/24/2019, $134.00

GRAPHIC TECHNOLOGY (TC 130)

ISO/DIS 20616-2, Graphic technology - File format for quality control and metadata - Part 2: Print quality exchange (PQX) - 3/31/2019, $107.00

HEALTH INFORMATICS (TC 215)

ISO/DIS 17090-4, Health informatics - Public key infrastructure - Part 4: Digital signatures for healthcare documents - 6/6/2019, $93.00

IMPLANTS FOR SURGERY (TC 150)

ISO 14243-1/DAmd1, Implants for surgery - Wear of total knee-joint prostheses - Part 1: Loading and displacement parameters for wear-testing machines with load control and corresponding environmental conditions for test - Amendment 1 - 6/3/2019, $29.00

ISO 14243-3/DAmd1, Implants for surgery - Wear of total knee-joint prostheses - Part 3: Loading and displacement parameters for wear-testing machines with displacement control and corresponding environmental conditions for test - Amendment 1 - 6/3/2019, $29.00

ISO/DIS 14879-1, Implants for surgery - Total knee-joint prostheses - Part 1: Determination of endurance properties of knee tibial trays - 4/4/2019, $46.00

ISO/DIS 25539-2, Cardiovascular implants - Endovascular devices - Part 2: Vascular stents - 5/31/2019, $165.00

INDUSTRIAL AUTOMATION SYSTEMS AND INTEGRATION (TC 184)

ISO/DIS 15746-3, Automation systems and integration - Integration of advanced process control and optimization capabilities for manufacturing systems - Part 3: Validation and verification - 3/31/2019, $77.00

INDUSTRIAL TRUCKS (TC 110)

ISO/DIS 6292, Powered industrial trucks and tractors - Brake performance and component strength - 4/6/2019, $58.00

INTERNAL COMBUSTION ENGINES (TC 70)

ISO/DIS 4548-5, Methods of test for full-flow lubricating oil filters for internal combustion engines - Part 5: Test for cold start simulation and hydraulic pulse durability - 6/2/2019, $46.00

LIFTS, ESCALATORS, PASSENGER CONVEYORS (TC 178)

ISO/DIS 8100-32, Lifts for the transportation of persons and goods - Part 32: Planning and selection of passenger lifts to be installed in office, hotel and residential buildings - 4/6/2019, $112.00

MEDICAL DEVICES FOR INJECTIONS (TC 84)

ISO 10555-6/DAmd1, Intravascular catheters - Sterile and single-use catheters - Part 6: Subcutaneous implanted ports - Amendment 1 - 6/6/2019, $29.00

MINING (TC 82)

ISO/DIS 22932-1, Mining - Terminology - Part 1: Planning and surveying - 5/27/2019, $146.00

NUCLEAR ENERGY (TC 85)

ISO/DIS 16795, Nuclear energy - Determination of Gd2O3 content of gadolinium fuel pellets by X-ray fluorescence spectrometry - 3/31/2019, $46.00

OPTICS AND OPTICAL INSTRUMENTS (TC 172)

ISO 8596/DAmd1, Ophthalmic optics - Visual acuity testing - Standard and clinical optotypes and their presentation - Amendment 1 - 3/31/2019, $29.00

ISO 24157/DAmd1, Ophthalmic optics and instruments - Reporting aberrations of the human eye - Amendment 1 - 3/31/2019, $29.00

ISO/DIS 18340, Endoscopes - Trocar pins, trocar sleeves and endotherapy devices for use with trocar sleeves - 4/6/2019, $46.00

ISO/DIS 22531, Optics and photonics - Optical materials and components - Test method for climate resistance of optical glass - 4/6/2019, $58.00

PAINTS AND VARNISHES (TC 35)

ISO/DIS 8501-4, Preparation of steel substrates before application of paints and related products - Visual assessment of surface cleanliness - Part 4: Preparation grades of coated and uncoated steel substrates after removal of rust and previous coatings by high-pressure water-jetting - 11/12/2001, $53.00

ISO/DIS 8502-6, Preparation of steel substrates before application of paints and related products - Tests for the assessment of surface cleanliness - Part 6: Extraction of water soluble contaminants for analysis - The Bresle method - 6/2/2019, $58.00

ISO/DIS 8502-9, Preparation of steel substrates before application of paints and related products - Tests for the assessment of surface cleanliness - Part 9: Field method for the conductometric determination of water-soluble salts - 12/5/2018, $46.00

PAPER, BOARD AND PULPS (TC 6)

ISO/DIS 2493-2, Paper and board - Determination of resistance to bending - Part 2: Taber-type tester - 6/3/2019, $53.00

ISO/DIS 6588-1, Paper, board and pulps - Determination of pH of aqueous extracts - Part 1: Cold extraction - 12/6/2030, $46.00

ISO/DIS 6588-2, Paper, board and pulps - Determination of pH of aqueous extracts - Part 2: Hot extraction - 12/6/2030, $46.00

ISO/DIS 8791-5, Paper and board - Determination of roughness/smoothness (air leak methods) - Part 5: Oken method - 3/31/2019, $58.00

PERSONAL SAFETY - PROTECTIVE CLOTHING AND EQUIPMENT (TC 94)

ISO 18640-1/DAmd1, Protective clothing for firefighters - Physiological impact - Part 1: Measurement of coupled heat and moisture transfer with the sweating torso - Amendment 1 - 4/6/2019, $29.00

ISO 18640-2/DAmd1, Protective clothing for firefighters - Physiological impact - Part 2: Determination of physiological heat load caused by protective clothing worn by firefighters - Amendment 1 - 4/6/2019, $29.00

PETROLEUM PRODUCTS AND LUBRICANTS (TC 28)

ISO 4259-1/DAmd1, Petroleum and related products - Precision of measurement methods and results - Part 1: Determination of precision data in relation to methods of test - Amendment 1: Test result validity process is to be moved into a separate reporting limit instruction - 4/5/2019, $33.00

ISO 4259-2/DAmd1, Petroleum and related products - Precision of measurement methods and results - Part 2: Interpretation and application of precision data in relation to methods of test - Amendment 1: Correction of several errors in terms of internal references, mistakes in formulas and in sheets - 4/5/2019, $33.00

ISO/DIS 14935, Petroleum and related products - Determination of wick flame persistence of fire-resistant fluids - 3/31/2019, $46.00

PLASTICS (TC 61)

ISO/DIS 75-1, Plastics - Determination of temperature of deflection under load - Part 1: General test method - 3/31/2019, $58.00

ISO/DIS 22766, Plastics - Determination of the degree of disintegration of plastic materials in marine habitats under real field conditions - 4/4/2019, $71.00

ISO/DIS 26723, Plastics - Determination of total luminous transmittance and reflectance - 4/4/2019, $58.00

ISO/DIS 16620-2, Plastics - Biobased content - Part 2: Determination of biobased carbon content - 4/4/2019, $88.00

ISO/DIS 24022-1, Plastics - Polystyrene (PS) moulding and extrusion materials - Part 1: Designation system and basis for specifications - 4/8/2019, $46.00

ISO/DIS 24022-2, Plastics - Polystyrene (PS) moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties - 4/8/2019, $40.00

ISO/DIS 24023-1, Plastics - Plasticized poly(vinyl chloride) (PVC-P) moulding and extrusion materials - Part 1: Designation system and basis for specifications - 4/8/2019, $40.00

ISO/DIS 24023-2, Plastics - Plasticized poly(vinyl chloride) (PVC-P) moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties - 4/8/2019, $40.00

ISO/DIS 24024-1, Plastics - Homopolymer and copolymer resins of vinyl chloride - Part 1: Designation system and basis for specifications - 4/8/2019, $53.00

ISO/DIS 24024-2, Plastics - Homopolymer and copolymer resins of vinyl chloride - Part 2: Preparation of test samples and determination of properties - 4/8/2019, $40.00

ISO/DIS 24025-1, Plastics - Sulfone polymer moulding and extrusion materials - Part 1: Designation system and basis for specifications - 4/8/2019, $53.00

ISO/DIS 24025-2, Plastics - Sulfone polymer moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties - 4/8/2019, $40.00

PROSTHETICS AND ORTHOTICS (TC 168)

ISO/DIS 8551, Prosthetics and orthotics - Functional deficiencies - Description of the person to be treated with an orthosis, clinical objectives of treatment, and functional requirements of the orthosis - 5/30/2019, $40.00

ISO/DIS 8548-2, Prosthetics and orthotics - Limb deficiencies - Part 2: Method of describing lower limb amputation stumps - 5/30/2019, $77.00

ROAD VEHICLES (TC 22)

ISO/DIS 20794-2, Road vehicles - Clock extension peripheral interface (CXPI) - Part 2: Application layer - 5/24/2019, $107.00

ISO/DIS 20794-3, Road vehicles - Clock extension peripheral interface (CXPI) - Part 3: Transport and network layer - 5/24/2019, $82.00

ISO/DIS 20794-4, Road vehicles - Clock extension peripheral interface (CXPI) - Part 4: Data link layer and physical layer - 5/24/2019, $125.00

RUBBER AND RUBBER PRODUCTS (TC 45)

ISO/DIS 3387, Rubber - Determination of crystallization effects by hardness measurements - 6/3/2019, $53.00

ISO/DIS 3865, Rubber, vulcanized or thermoplastic - Methods of test for staining in contact with organic material - 6/3/2019, $53.00

ISO/DIS 7725, Rubber and rubber products - Determination of chlorine and bromine content - 6/6/2019, $77.00

ISO/DIS 8789, Rubber hoses and hose assemblies for liquefied petroleum gas in motor vehicles - Specification - 5/24/2019, $58.00

ISO/DIS 20927, Rubber compounding ingredients - Precipitated silica - Determination of aggregate size distribution by disc centrifuge - 4/4/2019, $62.00

SECURITY (TC 292)

ISO/DIS 22392, Security and resilience - Community resilience - Guidelines for conducting peer reviews - 5/25/2019, $102.00

ISO/DIS 22328-1, Security and resilience - Emergency management - Community-based disaster early warning system - Part 1: Guidelines for implementation of a community-based disaster early warning system - 6/3/2019, $62.00

SERVICE ACTIVITIES RELATING TO DRINKING WATER SUPPLY SYSTEMS AND WASTEWATER SYSTEMS - QUALITY CRITERIA OF THE SERVICE AND PERFORMANCE INDICATORS (TC 224)

ISO/DIS 24527, Service activities relating to drinking water supply, wastewater and stormwater systems - Guidelines on alternative drinking water service provision during a crisis - 3/31/2019, $98.00

SOLID BIOFUELS (TC 238)

ISO/DIS 21404, Solid biofuels - Determination of ash melting behaviour - 3/31/2019, $62.00

SOLID MINERAL FUELS (TC 27)

ISO/DIS 349, Hard coal - Audibert-Arnu dilatometer test - 4/6/2019, $67.00

ISO/DIS 15585, Solid mineral fuels - Hard coal - Determination of caking index - 11/7/2002, $58.00

STEEL (TC 17)

ISO/DIS 4948, Classification of steel based on chemical composition - 4/5/2019, $46.00

SUSTAINABLE DEVELOPMENT IN COMMUNITIES (TC 268)

ISO/DIS 37156, Guidelines on data exchange and sharing for smart community infrastructures - 4/6/2019, $102.00

ISO/DIS 37160, Smart community infrastructure - Measurement methods for quality of thermal power station infrastructure and requirements for plant operations and management - 5/24/2019, $71.00

TECHNICAL DRAWINGS, PRODUCT DEFINITION AND RELATED DOCUMENTATION (TC 10)

ISO 129-1/DAmd1, Technical product documentation (TPD) - Presentation of dimensions and tolerances - Part 1: General principles - Amendment 1 - 5/31/2019, $29.00

TERMINOLOGY (PRINCIPLES AND COORDINATION) (TC 37)

ISO/DIS 24613-2, Language resource management - Lexical markup framework (LMF) - Part 2: Machine Readable Dictionary (MRD) model - 4/6/2019, $82.00

TEXTILES (TC 38)

ISO/DIS 2648, Wool - Determination of fibre length distribution parameter - Capacitance method - 4/6/2019, $82.00

TOURISM AND RELATED SERVICES (TC 228)

ISO/DIS 21406, Tourism and related services - Yacht harbours - Essential requirements for luxury harbours - 4/1/2019, $77.00

TRADITIONAL CHINESE MEDICINE (TC 249)

ISO/DIS 22894, Traditional Chinese medicine - Pulse waveform format - 4/1/2019, $62.00

ISO/DIS 18662-2, Traditional Chinese medicine - Vocabulary - Part 2: Processing of Chinese materia medica - 4/6/2019, $82.00

TRANSPORT INFORMATION AND CONTROL SYSTEMS (TC 204)

ISO/DIS 20901, Intelligent transport systems - Emergency electronic brake light systems (EEBL) - Performance requirements and test procedures - 3/31/2019, $67.00

WOOD-BASED PANELS (TC 89)

ISO/DIS 18775, Veneers - Terms and definitions, determination of physical characteristics and tolerances - 6/7/2019, $71.00

ISO/DIS 2426-1, Plywood - Classification by surface appearance - Part 1: General - 6/7/2019, $40.00

ISO/DIS 2426-2, Plywood - Classification by surface appearance - Part 2: Hardwood - 6/7/2019, $40.00

ISO/IEC JTC 1, Information Technology

ISO/IEC DIS 21836, Information Technology - Data Centres - Server Energy Effectiveness Metric - 3/31/2019, $134.00

ISO/IEC DIS 19757-7, Information technology - Document Schema Definition Languages (DSDL) - Part 7: Character Repertoire Description Language (CREPDL) - 3/31/2019, $71.00

IEC Standards

CAB/1828/DV, Approval of the revised IECEx 01-S, IECEx Supplement to Harmonized Basic Rules IEC CA 01, 2019/4/12

CAB/1827/DV, Approval of the revised IECQ 01-S, Supplement to Harmonized Basic Rules IEC CA 01, 2019/4/12

9/2482/CDV, IEC 62505-3-1 ED2: Railway applications - Fixed installations - Particular requirements for a.c. switchgear - Part 3-1: Measurement, control and protection devices for specific use in a.c. tractions systems - Devices, 019/6/7/

9/2483/CDV, IEC 62505-3-2 ED2: Railway applications - Fixed installations - Particular requirements for a.c. switchgear - Part 3-2: Measurement, control and protection devices for specific use in a.c. traction systems - Current transformers, 019/6/7/

9/2484/CDV, IEC 62505-3-3 ED2: Railway applications - Fixed installations - Particular requirements for a.c. switchgear - Part 3-3: Measurement, control and protection devices for specific use in a.c. traction systems - Voltage transformers, 019/6/7/

17A/1216/FDIS, IEC 62271-107 ED3: High-voltage switchgear and controlgear - Part 107: Alternating current fused circuit-switchers for rated voltages above 1 kV up to and including 52 kV, 2019/4/26

17A/1220/CD, IEC 62271-105 ED3: High-voltage switchgear and controlgear - Part 105: Alternating current switch-fuse combinations for rated voltages above 1 kV up to and including 52 kV, 019/6/7/

17A/1219/CD, IEC 62271-100 ED3: High-voltage switchgear and controlgear - Part 100: Alternating current circuit-breakers, 019/6/7/

17C/705/CD, IEC 62271-200 ED3: High-voltage switchgear and controlgear - Part 200: AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV, 019/6/7/

25/659/CD, ISO 80000-1 ED2: Quantities and units - Part 1: General, 2019/5/10

34/603/CD, IEC TR 61547-1 ED3: Equipment for general lighting purposes - EMC immunity requirements - Part 1: An objective light flickermeter and voltage fluctuation immunity test method, 019/6/7/

34/600/FDIS, IEC 62386-104 ED1: Digital addressable lighting interface - Part 104: General requirements - Wireless and alternative wired system components, 2019/4/26

34/601/CD, IEC 63103 ED1: Lighting equipment - Non-active mode power measurement, 019/6/7/

34C/1447/CD, IEC 61347-1/FRAG13 ED4: Lamp controlgear - Part 1: General and safety requirements, 019/6/7/

34C/1448/CD, IEC 61347-1/FRAG14 ED4: Lamp controlgear - Part 1: General and safety requirements, 019/6/7/

34C/1449/CD, IEC 61347-1/FRAG15 ED4: Lamp controlgear - Part 1: General and safety requirements, 019/6/7/

37/450/FDIS, IEC 60099-6 ED2: Surge arresters - Part 6: Surge arresters containing both series and parallel gapped structures - System voltage of 52 kV and less, 2019/4/26

37B/183/NP, PNW 37B-183 ED1: Components for low-voltage surge protection - Part 332: Selection and application principles for metal oxide varistors (MOV), 019/6/7/

40/2662(F)/CDV, IEC 60115-1 ED5: Fixed resistors for use in electronic equipment - Part 1: Generic specification, 2019/5/31

48B/2721/CDV, IEC 63171-1 ED1: Connectors for electrical and electronic components - Product requirements - Part 1: Detail specification for 2-way, shielded or unshielded, free and fixed connectors: mechanical mating information, pin assignment and additional requirements for TYPE 1 / Copper LC Style, 019/6/7/

48D/696/CDV, IEC 61969-3 ED3: Mechanical structures for electrical and electronic equipment - Outdoor enclosures - Part 3: Environmental requirements, tests and safety aspects, 019/6/7/

48D/695/CDV, IEC 61969-1 ED3: Mechanical structures for electrical and electronic equipment - Outdoor enclosures - Part 1: Design guidelines, 019/6/7/

51/1273/CDV, IEC 62025-2 ED2: High frequency inductive components - Non-electrical characteristics and measuring methods - Part 2: Test methods for non-electrical characteristics, 019/6/7/

57/2084/DTS, IEC TS 61850-1-2 ED1: Communication networks and systems for power utility automation - Part 1-2: Guideline on extending IEC 61850, 019/6/7/

65/744/DTS, IEC TS 63164-1 ED1: Reliability of Industrial Automation Devices and Systems - Part 1: Assurance of automation devices reliability data and specification of their source, 019/6/7/

65C/958/CD, IEC 62439-3 ED4: Industrial communication networks - High availability automation networks - Part 3: Parallel Redundancy Protocol (PRP) and High-availability Seamless Redundancy (HSR), 019/6/7/

77C/285/CDV, IEC 61000-4-25 Ed. 1 Amendment 2: Electromagnetic compatibility (EMC) - Part 4-25: Testing and measurement techniques - HEMP immunity test methods for equipment and systems, 019/6/7/

79/619/NP, PNW 79-619: Video surveillance systems for use in security applications - Part 2-33: Cloud uplink and remote management system access, 019/6/7/

81/617/Q, Proposed technical corrigendum to IEC 62561-2 Ed.2.0: Lightning protection system components (LPSC) - Part 2: Requirements for conductors and earth electrodes, 2019/4/26

86/551/FDIS, IEC 62129-3 ED1: Calibration of wavelength/optical frequency measurement instruments - Part 3:Optical frequency meters internally referenced to a frequency comb, 2019/4/26

86A/1932/FDIS, IEC 60793-2-10 ED7: Optical fibres - Part 2-10: Product specifications - Sectional specification for category A1 multimode fibres, 2019/4/26

91/1557/CDV, IEC 62878-2-5 ED1: Device embedded substrate - Part 2-5: Implementation of a 3D data format for device embedded substrate, 019/6/7/

100/3208/CDV, IEC 60728-11 ED5: Cable networks for television signals, sound signals and interactive services - Part 11: Safety (TA 5), 019/6/7/

100/3231/CD, IEC 60268-7/AMD1 ED3: Sound system equipment - Part 7: Headphones and earphones, 2019/5/10

104/829/FDIS, IEC 60721-3-3 ED3: Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 3: Stationary use at weatherprotected locations, 2019/4/26

104/828/FDIS, IEC 60721-3-4 ED3: Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 4: Stationary use at non-weatherprotected locations, 2019/4/26

110/1092/CD, IEC 62595-2-4 ED1: Display Lighting Unit - Part 2-4: Electro-optical measuring methods of laser module, 2019/5/10

119/263/CD, IEC 62899-302-3 ED1: Printed Electronics - Part 302-3: Equipment - Inkjet - Imaging-based measurement of drop direction, 019/6/7/

121A/284/FDIS, IEC 60947-5-4/AMD1 ED2: Low-voltage switchgear and controlgear - Part 5-4: Control circuit devices and switching elements - Method of assessing the performance of low-energy contacts - Special tests, 2019/4/26

121B/84/CD, IEC 61439-2 ED3: Low-voltage switchgear and controlgear assemblies - Part 2: Power switchgear and controlgear assemblies, 019/6/7/

CIS/A/1290/FDIS, CISPR 16-1-1 ED5: Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-1: Radio disturbance and immunity measuring apparatus - Measuring apparatus, 2019/4/26

SyCSmartCities/77/CD, IEC 60050-831 ED1: International Electrotechnical Vocabulary (IEV) - Part 831: Smart city systems, 019/6/7/

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 7305:2019, Milled cereal products - Determination of fat acidity, $68.00

ISO 12871:2019, Olive oils and olive-pomace oils - Determination of aliphatic and triterpenic alcohols content by capillary gas chromatography, $103.00

ISO 20976-1:2019, Microbiology of the food chain - Requirements and guidelines for conducting challenge tests of food and feed products - Part 1: Challenge tests to study growth potential, lag time and maximum growth rate, $162.00

BRAND EVALUATION (TC 289)

ISO 20671:2019, Brand evaluation - Principles and fundamentals, $68.00

ENVIRONMENTAL MANAGEMENT (TC 207)

ISO 14008:2019, Monetary valuation of environmental impacts and related environmental aspects, $162.00

IMPLANTS FOR SURGERY (TC 150)

ISO 6474-1:2019, Implants for surgery - Ceramic materials - Part 1: Ceramic materials based on high purity alumina, $68.00

ISO 6474-2:2019, Implants for surgery - Ceramic materials - Part 2: Composite materials based on a high-purity alumina matrix with zirconia reinforcement, $68.00

INDUSTRIAL FANS (TC 117)

ISO 12759-3:2019, Fans - Efficiency classification for fans - Part 3: Fans without drives at maximum operating speed, $68.00

INTERNAL COMBUSTION ENGINES (TC 70)

ISO 2710-2:2019, Reciprocating internal combustion engines - Vocabulary - Part 2: Terms for engine maintenance, $45.00

LIFTS, ESCALATORS, PASSENGER CONVEYORS (TC 178)

ISO 8100-1:2019, Lifts for the transport of persons and goods - Part 1: Passenger and goods passenger lifts, $232.00

ISO 8100-2:2019, Lifts for the transport of persons and goods - Part 2: Design rules, calculations, examinations and tests of lift components, $232.00

OTHER

ISO 22700:2019, Leather - Measuring the colour and colour difference of finished leather, $68.00

PLASTICS PIPES, FITTINGS AND VALVES FOR THE TRANSPORT OF FLUIDS (TC 138)

ISO 11413:2019, Plastics pipes and fittings - Preparation of test piece assemblies between a polyethylene (PE) pipe and an electrofusion fitting, $68.00

SERVICE ACTIVITIES RELATING TO DRINKING WATER SUPPLY SYSTEMS AND WASTEWATER SYSTEMS - QUALITY CRITERIA OF THE SERVICE AND PERFORMANCE INDICATORS (TC 224)

ISO 24513:2019, Service activities relating to drinking water supply, wastewater and stormwater systems - Vocabulary, $45.00

SOIL QUALITY (TC 190)

ISO 15799:2019, Soil quality - Guidance on the ecotoxicological characterization of soils and soil materials, $185.00

SPORTS AND RECREATIONAL EQUIPMENT (TC 83)

ISO 9838:2019, Alpine and touring ski-bindings - Test soles for ski-binding tests, $68.00

STERILIZATION OF HEALTH CARE PRODUCTS (TC 198)

ISO 11138-7:2019, Sterilization of health care products - Biological indicators - Part 7: Guidance for the selection, use and interpretation of results, $209.00

TEXTILES (TC 38)

ISO 9092:2019, Nonwovens - Vocabulary, $45.00

ISO Technical Reports

ROBOTS AND ROBOTIC DEVICES (TC 299)

ISO/TR 23482-2:2019, Robotics - Application of ISO 13482 - Part 2: Application guidelines, $209.00

TRANSPORT INFORMATION AND CONTROL SYSTEMS (TC 204)

ISO/TR 22086-1:2019, Intelligent transport systems (ITS) - Network based precise positioning infrastructure for land transportation - Part 1: General information and use case definitions, $103.00

ISO Technical Specifications

LIFTS, ESCALATORS, PASSENGER CONVEYORS (TC 178)

ISO/TS 8100-3:2019, Lifts for the transport of persons and goods - Part 3: Requirements from other Standards (ASME A17.1/CSA B44 and JIS A 4307-1/JIS A 4307-2) not included in ISO 8100-1 or ISO 8100-2, $185.00

PERSONAL SAFETY - PROTECTIVE CLOTHING AND EQUIPMENT (TC 94)

ISO/TS 16976-3:2019, Respiratory protective devices - Human factors - Part 3: Physiological responses and limitations of oxygen and limitations of carbon dioxide in the breathing environment, $138.00

ISO/IEC JTC 1, Information Technology

ISO/IEC 8824-1/Amd1:2019, Information technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation - Amendment 1: Relaxing imports clause to allow importation of definitions from new versions of a given module, $19.00

ISO/IEC 14492:2019, Information technology - Lossy/lossless coding of bi-level images, $232.00

ISO/IEC 24773-1:2019, Software and systems engineering - Certification of software and systems engineering professionals - Part 1: General requirements, $68.00

IEC Standards

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

IEC 60268-21 Ed. 1.0 b:2018, Sound system equipment - Part 21: Acoustical (output-based) measurements, $352.00

SWITCHGEAR AND CONTROLGEAR AND THEIR ASSEMBLIES FOR LOW VOLTAGE (TC 121)

IEC 61439-3 Ed. 1.0 b cor.2:2019, Corrigendum 2 - Low-voltage switchgear and controlgear assemblies - Part 3: Distribution boards intended to be operated by ordinary persons (DBO), $0.00

IEC Technical Reports

SURFACE MOUNTING TECHNOLOGY (TC 91)

IEC/TR 62878-2-7 Ed. 1.0 en:2019, Device embedding assembly technology - Part 2-7: Guidelines - Accelerated stress testing of passive embedded circuit boards, $82.00

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 notified 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 notify proposed technical regulations that may significantly affect trade to the WTO Secretariat in Geneva, Switzerland. In turn, the Secretariat issues and makes available these notifications. The purpose of the notification requirement is to provide global trading partners with an opportunity to review and comment on the regulations before they become final.

The USA Inquiry Point for the WTO TBT Agreement is located at the National Institute of Standards and Technology (NIST) in the Standards Coordination Office (SCO). The Inquiry Point distributes the notified proposed foreign technical regulations (notifications) and makes the associated full-texts available to U.S. stakeholders via its online service, Notify U.S. Interested U.S. parties can register with Notify U.S. to receive e-mail alerts when notifications are added from countries and industry sectors of interest to them.

To register for Notify U.S., please visit http://www.nist.gov/notifyus/.

The USA WTO TBT Inquiry Point is the official channel for distributing U.S. comments to the network of WTO TBT Enquiry Points around the world. U.S. business contacts interested in commenting on the notifications are asked to review the comment guidance available on Notify U.S. at https://tsapps.nist.gov/notifyus/data/guidance/guidance.cfm prior to submitting comments.

For further information about the USA TBT Inquiry Point, please visit: https://www.nist.gov/standardsgov/what-we-do/trade-regulatory-programs/usa-wto-tbt-inquiry-point

Contact the USA TBT Inquiry Point at:(301) 975-2918; Fax: (301) 926-1559; E-mail: usatbtep@nist.gov or notifyus@nist.gov.

Information Concerning

American National Standards

Call for Members

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 of choice for information technology developers, producers and users for the creation and maintenance of 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 oversight of its 40+ Technical Committees. Additionally, the INCITS Executive Board has the international leadership role as the US Technical Advisory Group (TAG) to ISO/IEC JTC 1, Information Technology.

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, contact Jennifer Garner at jgarner@itic.org or visit http://www.incits.org/participation/membership-info for more information.

Membership in all interest categories is always welcome; however, the INCITS Executive Board seeks to broaden its membership base in the following categories:

- Service Providers
- Users
- Standards Development Organizations and Consortia
- Academic Institutions

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 premises 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 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 a materially affected parties as defined in SCTE's membership rules and operating procedures. More information is available at www.scte.org or by e-mail from standards@scte.org.

ANSI Accredited Standards Developers

Approval of Accreditation as an ANSI ASD

Behavioral Health Center of Excellence (BHCOE)

ANSI's Executive Standards Council has approved the Behavioral Health Center of Excellence (BHCOE), a new ANSI member in December 2018, as an ANSI Accredited Standards Developer (ASD) under its proposed operating procedures for documenting consensus on BHCOE-sponsored American National Standards, effective March 20, 2019. For additional information, please contact: Ms. Sara Gershfeld Litvak, MA, BCBA, Chief Executive Officer, Behavioral Health Center of Excellence, 7083 Hollywood Boulevard #565, Los Angeles, CA 90028; phone: 310.627.2746, ext. 1001; e-mail: sara@bhcoe.org.

International Organization for Standardization (ISO)

Call for U.S. TAG Administrator

ISO/TC 234 – Fisheries and Aquaculture

ANSI has been informed that American Society of Agricultural and Biological Engineers (ASABE), the ANSI-accredited U.S. TAG Administrator for ISO/TC 234, wishes to relinquish their role as U.S. TAG Administrator.

ISO/TC 234 operates under the following scope:

> Standardization in the field of fisheries and aquaculture, including, but not limited to, terminology, technical specifications for equipment and for their operation, characterization of aquaculture sites and maintenance of appropriate physical, chemical and biological conditions, environmental monitoring, data reporting, traceability and waste disposal.
>
> Excluded:
>
> - methods of analysis of food products and traceability (covered by ISO/TC 34);
> - personal protective clothing (covered by ISO/TC 94);
> - environmental monitoring (covered by ISO/TC 207).

Organizations interested in serving as the U.S. TAG Administrator or participating on a U.S. TAG should contact ANSI's ISO Team (isot@ansi.org).

New Secretariats

ISO/TC 304 – Healthcare organization management

InGenesis, Inc. has requested ANSI to delegate the responsibilities of the administration of the ISO/TC 304 secretariat to InGenesis, Inc. The secretariat was previously held by the University of Texas Medical Branch (UTMB) and the secretariat transfer is supported by the U.S. TAG.

ISO/TC 304 operates under the following scope:

> Standardization in the field of healthcare organization management including: classification, terminology, nomenclature, management practices and metrics that comprise the non-clinical operations in healthcare entities.

Organizations wishing to comment on the delegation of the responsibilities should contact ANSI's ISO Team (isot@ansi.org).

U.S. Technical Advisory Group (TAG)

Approval of TAG Accreditation

U.S. Technical Advisory Group to ISO TC 322, Sustainable Finance

ANSI's Executive Standards Council (ExSC) has formally approved the accreditation of the U.S. Technical Advisory Group to ISO TC 322, Sustainable finance under the Model Operating Procedures for U.S. Technical Advisory Groups to ANSI for ISO Activities as contained in Annex A of the ANSI International Procedures and with ASC X9, Inc. serving as TAG Administrator, effective March 15, 2019. For additional information, please contact: Ms. Janet Busch, Program Manager, ASC X9, Inc., 275 West Street, Suite 107, Annapolis, MD 21401; phone: 410.267.7707; e-mail: janet.busch@X9.org.

Reaccreditation

U.S. Technical Advisory Group (TAG) to ISO Technical Committee 199, Safety of Machinery

Comment Deadline: April 22, 2019

The U.S. Technical Advisory Group (TAG) to ISO Technical Committee 199, Safety of machinery has submitted an amendment to the procedures under which it is currently accredited (ANSI Model Procedures for US TAGs to ANSI for ISO Activities). As the language contained in the amendment to the model TAG operating procedures appears to be substantive in nature, the reaccreditation process is initiated.

To obtain a copy of the revision/amendment or to offer comments, please contact the TAG Administrator to the US TAG to ISO TC 199: Mr. David Felinski, US TAG Administrator to ISO/TC 199, ISO/TC 39/SC 10 and ISO/TC 270; President, B11 Standards, Inc., P.O. Box 690905; Houston, TX 77269; phone: 832.446.6999; e-mail: dfelinski@b11standards.org. You may view/download a copy of the revisions during the public review period at the following URL: www.ansi.org/accredPR.Please submit any public comments on the revised procedures to the TAG Administrator by April 22, 2019, with a copy to the ExSC Recording Secretary in ANSI's New York Office (jthompso@ANSI.org).

Information Concerning

Meeting Notice and Call for Members for the New INCITS Technical Committee on Digital Manufacturing (US TAG to JTC 1/WG 12 – 3D Printing and Scanning)

Organizational Meeting – April 16, 2019

The organizational meeting of the INCITS/Digital Manufacturing will be held electronically via WebEx on April 16, 2019 (12:00 PM to 4:00 PM (Eastern) / 9:00 AM to 1:00 PM (Pacific)). The agenda, related documents and instructions for joining the WebEx meeting will be distributed on April 2 to organizational representatives that have requested membership on the new committee. RSVPs for the meeting should be submitted to Bill Ash (bash@itic.org) as soon as possible.

The INCITS Executive Board established a new Technical Committee INCITS/Digital Manufacturing and delegated the US TAG responsibilities for JTC 1/WG 12 – 3D Printing and Scanning to this new INCITS Technical Committee. In addition to serving as the US TAG to JTC 1/WG 12, the scope of INCITS/Digital Manufacturing will include the development of ICT standards specifically relevant to digitally enabling the prototyping and manufacturing of physical objects. As necessary and when not covered elsewhere, this will include nomenclature, frameworks, interface and protocol specifications, and format specifications required for facilitating the digital control of the production and supply of physical objects including but not limited to additive and subtractive fabrication and automated assembly and distribution.

Scope of JTC 1/WG 12 on 3D Printing and Scanning – JTC 1/WG 12 was established with the following terms of reference:

1. *Serve as a focus of and proponent for JTC 1's standardization program on 3D Printing and Scanning.*
2. *Develop ICT related foundational standards for 3D Printing and Scanning upon which other standards can be developed.*
3. *Develop other 3D Printing and Scanning standards that are built upon the foundational standards when relevant ISO and IEC committees that could address these standards do not exist or are unable to develop them.*
4. *Identify gaps and opportunities in 3D Printing and Scanning standardization.*
5. *Develop and maintain liaisons with all relevant ISO and IEC committees as well as with external organizations that have interests in 3D Printing and Scanning.*
6. *Engage with 3D Printing and Scanning communities to raise awareness of JTC 1 standardization efforts and provide an open platform for discussion and further cooperation.*
7. *Develop and maintain a list of existing 3D Printing and Scanning standards produced and standards development projects underway in ISO TCs, IEC TCs and JTC 1.*

The INCITS committee will operate under the ANSI-accredited procedures for the InterNational Committee for Information Technology Standards (INCITS); (see INCITS Organization, Policies and Procedures). Additional information can also be found at http://www.INCITS.org and http://www.incits.org/participation/membership-info.

The complete meeting notice and membership information can be found at https://standards.incits.org/apps/group_public/document.php?document_id=106474&wg_abbrev=eb.

Information Concerning

Call for U.S. TAG Administrators

TC 72 – *Textile Machinery and Accessories*

There is currently no ANSI-accredited U.S. TAG Administrator for TC 72, TC 72/SC 1, TC 72/SC 3, TC 72/SC 5, TC 72/SC 8, and TC 72/SC 10, and therefore ANSI is not a member of these committees. The Secretariats for these committees are currently held by Switzerland (SNV) for TC 72, TC 72,SC 1, and TC 72/SC 10; and Germany (DIN) for TC 72/SC 3, TC 72/SC 5, and TC 72/SC 8.

TC 72 operates under the following scope:

Standardization of textile machinery, parts thereof and of accessories; machinery for dry-cleaning and industrial laundering and parts thereof and of accessories.

TC 72/SC 1 operates under the following scope:

Spinning preparatory, spinning, twisting and winding machinery and accessories

TC 72/SC 3 operates under the following scope:

Machinery for fabric manufacturing including preparatory machinery and accessories

TC 72/SC 5 operates under the following scope:

Industrial laundry and dry-cleaning machinery and accessories

TC 72/SC 8 operates under the following scope:

Safety requirements for textile machinery

TC 72/SC 10 operates under the following scope:

Common standards

Organizations interested in serving as the U.S. TAG Administrator or participating on a U.S. TAG for these committees should contact ANSI's ISO Team (isot@ansi.org) for more information.

Development of a Provisional Amendment

Public Notice of the Development of a Provisional Amendment by The Association of Electrical Equipment and Medical Imaging Manufacturers (NEMA) in accordance with ANNEX B of ANSI Essential Requirements (www.ansi.org/essentialrequirements)

The proposed Provisional Amendment to ANSI/NEMA WC 55021-2013 – *Military Internal Electrical Cable* is to resolve a supply shortage of marker tape printed with the cable part number. This has caused delays in the production of cable and disrupted the manufacture of aerospace equipment.

The alternative marking method proposed is already an accepted industry practice under similar standards such as ANSI/NEMA WC 27500-2015 – *Aerospace and Industry Electrical Cable*.

The proposal is to revise paragraph 3.3.6 of the standard as follows:

3.6.6 Cable Identification The method of identification shall be compatible with the cable construction as indicated by cable designation (see 2.2). Identification shall be at intervals of 1 to 3 feet and may be by marking of the outer jacket, or component wires or tape placed beneath the shield or jacket. The marking shall be of a contrasting color. Finished shielded, or jacketed or shielded and jacketed cables may have identifying print on any of the component wires, except in no case shall it be applied on wire sizes smaller than 28 AWG. All materials used for identification shall conform to the environmental requirements of the particular construction. The identification shall be clear and legible and shall include the following:

> Cable part Number, manufacturer's name or CAGE code (CAGEC), and year of manufacture.
>
> Example: M55021-S16E-905-904-903-902-901S09 12345 2013

Finished unshielded and unjacketed cable shall be identified with the printed marking of a contrasting color applied to the surface of any of the wires in a multi-conductor cable (see example above), except for cable with conductor sizes smaller than 24 AWG. The size of the printed characters shall be compatible with the basic wire size. No other printed marking shall be applied to the basic wire.

Contact: Gerard Winstanley, Program Manager – NEMA, Gerard.Winstanley@nema.org

Standard for the Plastering of Swimming Pools and Spas

PART I – GENERAL

1.1 SCOPE

1.1.1 This standard covers the material and application for the plastering of cementitious finish coatings for in-ground swimming pools or other cementitious water-containment vessels (see Appendix).

1.1.2 Except to the extent specified in the Standard, the terms specified by contractual agreement shall govern.

1.1.3 Except where indicated, this Standard shall apply to the public and residential plastering of swimming pools.

1.1.4 Where designated "For Public Swimming Pools Only" this portion of Standard shall apply to Class A, B, D, E and F public swimming pools as defined in ANSI[1]/APSP[2]-1 *Standard for Public Swimming Pools*, and shall not apply to residential or Class C public swimming pools.

1.2 SUMMARY

1.2.1 'Work' shall include all labor, materials, services, scaffolding, and equipment required to complete the plastering of the interior of a swimming pool, spa, water feature, or other water-containment vessel, as per the project stipulations, in accordance with drawings, plans, and provisions of the contract.

1.2.2 'Swimming pool,' 'water feature,' and 'water-containment vessel' are used within this standard interchangeably, and shall include any permanent vessel having a cementitious substrate designed to hold water, and that will have a cementitious interior finish coating applied (plastered) that will remain submersed in water during service life (see Appendix).

1.2.3 For the purposes of this standard, 'plastering' shall designate the methodology and/or action of applying a cementitious interior finish coating material in a swimming pool or other water-containment vessel.

1.3 APPLICABLE GOVERNING DOCUMENTS

1.3.1 All drawings, plans, and general provisions of the contract shall govern.

1.3.2 All codes, specifications, standards, manuals, guides, and related documents from Section 1.4 that are applicable to the trade practice of plastering of cementitious interior finish coatings for cementitious water containment vessels, and related work, when stipulated within the drawings, plans, or provisions of the contract, shall govern (see Appendix).

1.4 APPLICABLE MOST RECENT EDITION CODES, SPECIFICATIONS, STANDARDS, MANUALS, AND GUIDES RELATED TO PLASTERING, CONCRETE, AND SWIMMING POOLS

1.4.1 Related Sections in IBC Code[3]:

Chapter 19 – Concrete
Section 1910 – Shotcrete
Section 2511 – Interior Plaster
Section 2512 – Exterior Plaster
Section 2512 – Exposed Aggregate Plaster

1.4.2 Related Sections in APSP International Swimming Pool and Spa Code[4]:

Section 307.3 – Materials
Section 307.4 – Structural Design
Section 307.6 – Surface Condition
Section 307.7 – Colors and Finish
Section 411.5 (Item #4) – Underwater Seats, Benches, and Swimouts
Table 502.1 – Reservoirs and Shells
Section 610.5 – Pool Steps
Section 610.6 – Swimouts
Section 610.7 – Underwater Seats and Benches
Section 802.1 – Materials of Components and Accessories
Section 802.3 – Structural Design

1.4.3 Related ASTM[5] Specifications:

C 109 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars

C 150 Standard Specification for Portland Cement

1 American National Standards Institute (ANSI), 25 West 43rd Street, New York NY 10036 USA, 1-212-642-4900, www.ANSI.org

2 The Association of Pool and Spa Professionals (APSP), 2111 Eisenhower Avenue, Alexandria, VA 22314-4679 USA, 1-703-838-0083, www.APSP.org

3 The International Code Council (ICC), 4051 West Flossmoor Road, County Club Hills, IL 60478 USA, 1-888-ICC-SAFE (422-7233), www.iccsafe.org

4 The International Code Council (ICC), 4051 West Flossmoor Road, County Club Hills, IL 60478 USA, 1-888-ICC-SAFE (422-7233), www.iccsafe.org

5 ASTM International (formerly American Society of Testing & Materials), 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959 USA, 1-877-909-2786, www.ASTM.org

C 311 Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete

C 494 Specifications for Chemical Admixtures for Concrete

C 595 Specification for Blended Hydraulic Cements

C 897 Standard Specification for Aggregate for Job-Mixed Portland Cement-Based Plasters

C 926 Standard Specification for Application of Portland Cement-Based Plaster

C 932 Standard Specification for Surface-Applied Bonding Compounds for Exterior Plastering

C 979 Standard Specification for Pigments for Integrally Colored Concrete

C 1059 Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete

C 1157 Standard Performance Specification for Hydraulic Cement

D 4258 Standard Practice for Surface Cleaning Concrete for Coating

D 4259 Standard Practice for Abrading Concrete

D 4261 Standard Practice for Surface Cleaning Concrete Unit Masonry for Coating

D 4262 Standard Test Method for pH of Chemically Cleaned or Etched Concrete Surfaces

D 5295 Standard Guide for Preparation of Concrete Surfaces for Adhered (Bonded) Membrane Waterproofing Systems

E 1857 Standard Guide for Selection of Cleaning Techniques for Masonry, Concrete, and Stucco Surfaces

1.4.4 Related ACI[6] Code and Guide Documents:

318 Building Code Requirements for Structural Concrete

350 Building Code Requirements for Environmental Engineering Concrete Structures

201.2R Guide to Durable Concrete

225.R Guide to the Selection and Use of Hydraulic Cements

306.R Guide to Cold Weather Concreting

308.R Guide to Curing Concrete

506.R Guide to Shotcrete

515.R Guide to Barrier Systems

524.R Guide to Portland Cement-Based Plaster

546.R Concrete Repair Guide

1.4.5 Related Sections in AIA[7] MasterSpec:

Division 1 – General and Supplementary Conditions

Division 3 – Shotcrete

Division 6 – Sections "Ceramic Tile;" "Glass Tile;" and "Stone Tile"

Division 7 – Joint Sealants

Division 9 – Cement Plastering

1.4.6 Related NPC[8] Publications:

The National Plasterers Technical Manual

1.4.7 Related PCA[9] Publications:

EB049 Portland Cement Plaster (Stucco) Manual

1.5 DELIVERY, STORAGE, AND HANDLING

1.5.1 Delivery, storage, and handling of materials shall be in accordance with manufacturer's recommendations.

1.6 PROJECT PLACEMENT CONDITIONS

1.6.1 Solid base substrate to receive plaster coating shall comply with ASTM C 926 Standard Specification Section 5, as well as, ASTM C 926 – Annexes A1 – Mandatory General Information Sections A1.6; A.1.6.3; and A.2.1.5.

1.6.2 All proprietary materials; whether waterproofing, bond coat, leveling coat, or alternative finish coating materials, shall comply with producer/manufacturer/supplier written recommendations and stipulations with regard to substrate preparation and application (see Appendix).

1.6.3 The daily average temperature of the ambient air, from midnight to midnight, shall be greater than 40°F (4.4°C) and the temperature of the substrate shall be above 32°F (0.0°C) during the plastering application.

1.6.4 Post-installation, any non-submersed areas of the finish coating shall be protected from freezing temperatures for a minimum of 48 hours after final set.

6 American Concrete Institute (ACI), 38800 Country Club Drive, Farmington Hills, MI 48331-3439 USA, 1-248-848-3700, ACI www.concrete.org

7 The American Institute of Architects (AIA), 1735 New York Ave., NW, Washington, DC 20006-5292 USA, 1-800-AIA-3837 (242-3837), www.AIA.org

8 National Plasterers Council (NPC), 1000 N. Rand Road, Suite 214, Wauconda, IL 60084 USA, 1-847-416-7272, www.npconline.org

9 Portland Cement Association (PCA), 5420 Old Orchard Road, Skokie, IL 60077-1083 USA, 1-847-966-6200, www.cement.org

1.6.5 Upon final set, the swimming pool or water vessel shall immediately be filled with potable water. The water shall not be stopped until the finish coating is completely submersed (see Appendix).

PART 2 PRODUCTS

2.1 'NON-APPLICABLE' (PROHIBITED) MATERIALS OF SWIMMING POOL INTERIOR FINISHES

2.1.1 Structural reinforcement steel shall not be allowed.

2.1.2 Metal lath shall not be allowed.

2.1.3 Wire shall not be allowed.

2.1.4 No metals, other than those listed in Section 2.2.2, shall be permitted to be attached to, or be within, a swimming pool interior finish coating material, due to the corrosive nature of cement, water, and chemicals used in swimming pools, spas, and other water-containment vessels. Metal reinforcement within the solid-base substrate shall be embedded to a depth of at least 2-inches (5 cm) below the solid substrate surface that will be receiving the interior plaster finish coating as per ACI 350 Section 7.7.1 (see Appendix).

2.1.5 Lime shall not be allowed (see Section 2.3.5 and Appendix).

2.2 MISCELLANEOUS MATERIALS

2.2.1 Fibers shall be alkaline-resistant glass fibers, polypropylene, or cellulosic. Fibers shall be free of contaminants that cause damage to the finish coating or any component of the finish coating. Fibers shall be manufactured and acceptable for use with hydraulic cement-based materials.

2.2.2 Any metal accessories to be in contact with the cement-based finish coating shall be a non-reactive, stainless steel, plated, or otherwise coated, to survive the alkaline nature of cement and the corrosive nature of chemicals used in swimming pool water (see Appendix).

2.2.3 Tile, Joint Materials, Curable Materials – For Public Swimming Pools Only Joint materials that separate or divide the finish coating shall be pre-set level to the anticipated height of the hardened finish coating.

2.2.3.1 Perimeter tiles, step trim tiles, tile or material used as joints, breaks, or stops, must be pre-set level to the anticipated height of the hardened finish coating.

2.2.3.2 Tile for steps, benches, and swimouts shall be in accordance with Section 3.2.3.

2.2.3.3 Curable materials (e.g. thinset, bond coat, waterproofer, sealants, sealers, water plug, joint compounds, or similar curable material) must be fully cured prior to application of plaster, or to the recommended/stipulated levels, as per the producer/manufacturer/supplier (see Appendix).

2.2.3.4 Flexible or movement joint materials that will divide the finish coating shall have a rigid material installed on both sides of the flexible joint. The rigid material that borders the joint material shall be pre-set to the anticipated level of the hardened finish coating (see Appendix).

2.3 PLASTER MATERIALS – For Public Swimming Pools Only

2.3.1 Water for mixing shall be potable water and free of substances capable of affecting set time, as per ASTM C 926 Section 4.5 (see Appendix).

2.3.2 Hydraulic cement shall comply with one of the following specifications:

2.3.2.1 White Portland Cement: ASTM C 150, Type I

2.3.2.2 White Blended Cement: ASTM C 595, Type IP

2.3.2.3 White Blended Cement: ASTM C 595, Type IL (limestone)

2.3.2.4 White Blended Cement: ASTM C 1157, Type GU

2.3.3 Sand/aggregate shall comply with ASTM C 897 and ASTM C 926 or shall fall within one or more of the following specialty categories:

2.3.3.1 White marble, limestone, or dolomite sand.

2.3.3.2 Light-toned silica sand.

2.3.3.3 Narrow gradation sand or aggregate for exposed surfaces (see Appendix).

2.3.3.4 Color-coated or "accent" particles of sand or aggregate.

2.3.3.5 Formulated or colored, natural or synthetic, sand or aggregate, chosen to match or contrast the pigmented cementitious material background color (see Appendix).

2.3.3.6 Pre-blend, pre-mix, or proprietary mixes of sand/aggregate/accent material.

2.3.4 Pigment/colorant for job-mixed finish coatings (see Appendix):

2.3.4.1 Colorfast organic and/or inorganic pigment shall produce the approved color match to architect's, builder's, and/or owner's chosen sample or mockup.

2.3.4.2 Pigment colorant shall be compatible with other components of the mix design and have a satisfactory history of 'in-field' service of at least 2-years in a similar placement environment.

2.3.5 Lime shall not be used in the mix design of swimming pool interior finish coatings. This does not prohibit the usage of marble, limestone, or dolomite to be used as a filler, fines, sand, or aggregate component of a mix design (see Appendix 2.1.5).

2.4 PLASTER MIX DESIGNS

2.4.1 Mix design shall comply with ASTM C 926 – Section 6 for general mix design requirements of plaster.

2.4.2 Mix design shall comply with the National Plasterers Council Technical Manual for mix proportions specific to swimming pools, spas, and water features for base coat (scratch coat) and top coat (double) as follows:

2.4.2.1 General usage mix proportions shall be 1 part hydraulic cement and 1.5 – 2 part sand/aggregate, by weight.

2.4.2.2 Exposed sand/aggregate mix proportions shall be 1 part hydraulic cement and 1 – 1.5 parts sand/aggregate, by weight.

2.4.2.3 Additives for set control shall allow sufficient time to properly apply and finish the material and to properly harden (see Appendix).

2.4.2.4 Pozzolanic and/or polymeric additives for workability and/or durability shall not adversely affect the ability of the technician to properly finish the material.

2.4.2.5 Where used, pre-blend, pre-mix, or approved proprietary finish coating products shall comply with producer/manufacturer/supplier written instruction for proper mixing, application, and finishing.

PART 3 EXECUTION

3.1 PRE-SITE, EXAMINATION, PREPARATION – For Public Swimming Pools Only

3.1.1 When stipulated, a pre-site meeting for architect, builder, owner, and/or Installer to examine the jobsite and the water-containment vessel substrate, shall include the following:

3.1.1.1 Acceptability of the solid-base substrate and verification that compliance to all contract plastering requirements are achievable, given the current condition of the substrate.

3.1.1.2 Report observations and resolutions to issues or concerns that will otherwise negatively affect Installer's capability to perform work adequately, to satisfy the requirements of Section 3.1.1.1.

3.1.1.3 Considerations of, or alterations to, the contract work including materials, application, and/or installation of materials based on prevailing substrate condition, placement conditions, and/or the environment, to satisfy the requirements of Section 3.1.1.2.

3.1.1.4 Accessibility to the jobsite.

3.1.1.5 Potable water supply with adequate water pressure to facilitate mixing of materials and subsequent filling of the swimming pool or water-containment vessel.

3.1.2 All pre-site meetings or examinations of the swimming pool substrate made by the installer, as per 3.1.1, shall be reported to the architect, builder, owner, or responsible party, to ensure all unsatisfactory conditions are corrected by the responsible party prior to plastering.

3.1.3 Observation and corrections, as per 3.1.2, shall conform to ASTM C 926 – Section 5 – regarding applicable requirements for solid-base substrate preparation, as well as, applicable parts of ASTM C 926 – including ASTM C 926 – Annexes – Mandatory Information (see Appendix).

3.1.4 Adjacent work, and pertinent areas or materials around work, shall be protected from soiling, spattering, staining, or damage, prior to beginning plastering installation.

3.2 INSTALLING ACCESSORIES

3.2.1 Prior to the swimming pool being placed into service, the proper drains and suction covers shall be present, installed, and affixed in accordance with applicable safety standards as set forth by ANSI/APSP/ICC-7 *American National Standard for Suction Entrapment Avoidance In Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins* and ANSI/APSP-16 *American National Standard Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs* and be of appropriate sizing to accommodate the anticipated pump suction volume of water in accordance with said standards.

3.2.2 Lights, handrails, circulation return heads or directionals, and other accessories shall be installed and properly secured.

3.2.3 For public pools, tile for steps, benches, and swimouts shall be of a contrasting color and installed as set forth by ISPSC Section 411.5.2 (Item#5), Section 610.5.3, Section 610,6,4, and Section 610.7.5.

3.3 PLASTERING APPLICATION

3.3.1 The plastering application shall conform to the applicable sections of ASTM C 926 – Section 7.3 through Section 8.2 (see Appendix).

3.3.2 The finished surface of the finish coating shall be tight against all abutting materials.

3.4 PATCHING OF FINISH

3.4.1 When stipulated, patching or other repairs of the finish coating shall comply as follows:

3.4.1.1 Minor holes and/or cracks shall be repaired with appropriate materials such as with like, sanded or un-sanded, materials as is necessary to facilitate such repair.

3.4.1.2 Minor imperfections or rough areas of the surface shall be polished, sanded, chemically treated, or otherwise repaired, to within standard trade practices.

3.5 CLEANING JOBSITE AND PROTECTION OF FINISH

3.5.1 When necessary, temporary protection shall be put into place to protect the finish coating.

3.5.2 Temporary protection material(s) and all other debris created from the plastering application shall be removed and disposed of properly.

3.5.3 Overspray, splashes, or residue from work material(s) shall be promptly removed from adjacent tile work, decking, or other surfaces.

3.5.4 All tile, decking, and surrounding surfaces that become stained, marred, or otherwise damaged during the plastering application shall be cleaned and/or repaired.

BSR/ASHRAE Addendum aa
to ANSI/ASHRAE Standard 62.1-2016

Public Review Draft

Proposed Addendum aa to Standard 62.1-2016, Ventilation for Acceptable Indoor Air Quality

Third Public Review (February 2019)
(Draft Shows Proposed Independent Substantive Changes to Previous Public Review Draft)

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at www.ashrae.org/standards-research--technology/public-review-drafts 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 website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at www.ashrae.org/bookstore 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 website, www.ashrae.org.

The appearance of any technical data or editorial material in this public review document does not constitute endorsement, warranty, or guaranty by ASHARE of any product, service, process, procedure, or design, and ASHRAE expressly disclaims such.

ASHRAE, 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

The indoor air quality procedure (IAQP) has a long history going back to the 1981 standard. It has flexibility.

For design, it requires (simplified version):

1. *Identification if contaminants of concern*
2. *Determining indoor and outdoor sources*
3. *Identifying a concentration limit and exposure period*
4. *Specifying percentage of building occupants to be satisfied with perceived IAQ*
5. *Performing a mass balance analysis for selected compounds*

Weaknesses in current requirements exist in items 1, 3, and 4 above. Although the percentage in item 4 may be specified, and the standard requires that it be measured; this measurement usually would take place after occupancy so is often ignored or omitted. No measurement of any resulting concentration is currently required so the effectiveness of any design is not measured or verified.

This proposed addendum adds requirements for designing to specific targets. The target design compounds are specifically identified. Mixtures are specifically identified.

[Note to Reviewers: This public review draft makes proposed independent substantive changes to the previous public review draft. 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 previous draft 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 substantive changes.]

Addendum aa to 62.1-2016

Revise the definition in Section 3 as shown below. The remainder of Section 3 is unchanged.

3. DEFINITIONS (SEE FIGURE 3.1)

Particulate Matter 2.5 (PM2.5): aerosol particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers.

Revise Section 6.3 as shown below. The remainder of Section 3 is unchanged.

6.3 Indoor Air Quality (IAQ) Procedure. Breathing zone outdoor airflow (V_{bz}) shall be determined in accordance with Sections 6.3.1 through 6.3.6.

6.3.1 Design Compounds and PM2.5 Sources. The system design shall be based on the DCs and PM2.5 specified in Table 6.3.2.1 ~~at a minimum~~. If there are additional outdoor sources identified from completing the process in Section 4, or unusual sources ~~for the occupancy category~~, the compounds present in the source shall be

determined and they shall be added to the DC list if a design target from a cognizant authority exists. For each DC and PM2.5, the emission rates from indoor sources from ~~people~~ occupants, building materials, furnishings, equipment and other sources and the rate of contaminant influx into the building (mass per unit time) shall be determined.

Informative Note: Indoor emission rate information for some compounds is provided in Appendix C.

[…]

6.3.3 Air cleaning. Where particulate or ~~gaseous~~ gas phase air cleaning is included in the design, the removal efficiencies shall be specified as follows. Particulate matter filters shall report an efficiency reporting value (MERV) in accordance with ASHRAE Standard 52.2[12]. Gas phase ~~A~~air cleaners shall report an efficiency test for the DCs in accordance with ASHRAE Standard 145.2[XX]. ~~Devices that intentionally or unintentionally add ozone, aldehydes, or ultrafine particulate to the indoor air are prohibited.~~ Devices that increase ozone or formaldehyde concentrations above background levels by a quantifiable amount are prohibited.

6.3.3.1 Ozone Measurement. Measurement of ozone concentrations shall be conducted in accordance with ASHRAE Standard 145.2[xx] and using instruments meeting the criteria in Table 6.3.4.4.2. A quantifiable increase in ozone is an increase of 5 ppb or more above background levels.

Informative Note: A concentration difference of 5 ppb of ozone is 10 µg/m^3, which is approximately 3x the detection limit of commercially available instruments.

6.3.3.2 Formaldehyde Measurement. Measurement of formaldehyde concentrations shall be conducted in accordance with ASHRAE Standard 145.2[xx] and using measurement methods in Table 6.3.4.4.1. A quantifiable increase in formaldehyde is an increase of 5 ppb or more over background levels.

Informative Note: A concentration difference of 5.0 ppb is 6.15 µg/m^3, which is approximately 3x the detection limit attainable with methods listed in Table 6.3.4.4.1.

[…]

Table 6.3.4.4.1 Allowed laboratory test methods

Compound	**Allowed Test Methods**
VOCs except formaldehyde	ISO 16000-6[YY]; EPA IP-1[GG], EPA TO-17[EE]; ISO 16017-1[AA]; ISO 16017-2[BB]; ASTM D6345-10[KK]
formaldehyde	ISO 16000-3[ZZ]; EPA TO-11[FF]; EPA IP-6[II]; ASTM D5197[LL]
~~ozone~~	~~ASTM D5149-02[MM]; ISO13964[CC]~~
$PM_{2.5}$	EPA IP-10[JJ]
carbon monoxide	ISO 4224[DD]; EPA IP-3[HH]
carbon dioxide	ISO 4224[DD]; EPA IP-3[HH]

Table 6.3.4.4.2 Direct reading instruments minimum specifications

	CO_2	**Ozone**	**$PM_{2.5}$**	**CO**
Accuracy (±)	100 ppm ± 3% of reading	~~Greater of~~ 5 ppb ~~or 20% of reading~~	Greater of 5 micrograms/m^3 or 20% of reading	Greater of 3 ppm or 20% of reading
Resolution ~~(of 5 min average data)~~ (±)	5 ppm	~~5~~ 1 ppb	5 µg/m^3	1 ppm

6.3.4.4.1 Design Compounds and PM2.5 Measurement Test. The measurement equipment shall be positioned in the breathing zone. The measurement shall be conducted within 60 days of building commissioning and occupancy during normal working hours, ~~maximum~~ typical occupant load ~~under conditions of current operation,~~ and with the HVAC system in normal operation and lowest outdoor air intake setting expected during the year. The number of measurement points shall be specified according to Table 6.3.4.4.3.

[…]

6.3.6 Documentation. Design documentation shall include the inventory of PM2.5, DCs and DTs and mixtures thereof; outdoor source data; emission rates including citations; cognizant authorities for any additional DCs; ~~ASHRAE 52.2[12] and 145.2[XX] efficiency~~ test data required by 6.3.3 ~~for all air cleaning devices~~; mass balance calculations; subjective survey and results or documentation of compliance with 6.3.4.3. ~~Design documentation shall include documentation for air cleaners that they do not produce detectable ozone, aldehydes, and ultrafine particulate matter under representative conditions of operation.~~ The concentrations shall be measured using the relevant laboratory methods specified in Table 6.3.4.4.1 and the performance requirements specified in Table 6.3.4.4.2 shall be followed.

Delete the following references in Section 9. The remainder of Section 9 is unchanged.

9. References

[…]

~~*CC. ISO Standard 13964 (1998), Air quality – Determination of ozone in ambient air – Ultraviolet photometric method.* Geneva, Switzerland, International Organization for Standardization.~~

[…]

~~*MM. ASTM D5149-02 (2016). Standard Test Method for Ozone in the Atmosphere: Continuous Measurement by Ethylene Chemiluminescence.* ASTM International, West Conshohocken, PA.~~

BSR/ASHRAE Addendum ad
to ANSI/ASHRAE Standard 62.1-2016

Public Review Draft

Proposed Addendum ad to Standard 62.1-2016, Ventilation for Acceptable Indoor Air Quality

Second Public Review (February 2019)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

Table 6.5 (Minimum Exhaust Rates) lists minimum exhaust rates for certain spaces in which contaminants generation have been deemed high enough that it contaminant cannot be diluted and thus need to be exhausted. However, the standard does not require these spaces to be at any pressure. This proposed addendum adds the requirement for these spaces to be at a negative pressure with respect to adjacent spaces in order to minimize contaminants leakage to adjacent spaces.

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Addendum ad to 62.1-2016

Revise Section 6.5.1 as shown below. Note that Section 6.5.1.1 (not shown) and Table 6.5.1 (formerly Table 6.5) are added by proposed Addendum x to 62.1-2016.

6.5 Exhaust Ventilation. The Prescriptive Compliance Path or the Performance Compliance Path shall be used to meet the requirements of this section. Exhaust makeup air shall be permitted to be any combination of outdoor air, recirculated air, or transfer air.

6.5.1 Prescriptive Compliance Path. The design exhaust airflow shall be determined in accordance with the requirements in Table 6.5.1.

[…]

6.5.1.2 Pressure Requirements. While the required exhaust systems are operating, the exhaust airflow of zones listed in Table 6.5.1 shall be larger than their respective supply airflow. If zones listed in Table 6.5.1 are adjacent, the difference between the exhaust and the supply airflow shall be larger for the zone with the higher number class of air.

Exception: where airflow offset requirements are established by the Environmental Health and Safety professional responsible to the owner or owner's designee"

Informative Note: Where intermittent operation is allowed in Table 6.5.1, exhaust equipment is intended to be operated when the space is in use.

BSR/ASHRAE Addendum ae
to ANSI/ASHRAE Standard 62.1-2016

Public Review Draft

Proposed Addendum ae to Standard 62.1-2016, Ventilation for Acceptable Indoor Air Quality

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FOREWORD

The 60°F (15°C) indoor air dewpoint limit avoids the microbial growth problems frequently observed when humid outdoor air infiltrates into buildings that are mechanically cooled. Microbial growth has been common during cooling seasons, and especially when cooling and occupancy are intermittent. Examples include schools during summer vacations, apartments and condominiums that are intermittently occupied during summer months, college dormitories and military barracks that are unoccupied for long periods and in health care buildings and hotels in hot or humid climates that contain both naturally-ventilated and mechanically-cooled spaces.

Humidity-related requirements of earlier versions of Standard 62.1 were intended to address both mold growth and comfort concerns by limiting indoor humidity to 65%RH. That requirement, however, did not explicitly extend to unoccupied hours when microbial growth often accelerates. More importantly, because it did not establish a coincident dry bulb temperature, the 65% RH limit did not limit the mass of water vapor available for surface absorption during periods when cooling is intermittent to conserve energy.

Microbial growth is governed by the availability of moisture in the surfaces of building materials, coatings, furnishings and mechanical systems. The RH of the air does not affect microbial growth until the water vapor is absorbed or condenses into the surface. Limiting the indoor air dewpoint rather than the RH limits the total mass of water vapor available for condensation or absorption. Further, limiting the dewpoint to 60°F (15°C) prevents actual condensation until the air contacts a surface that is cooler than 60°F. Few surfaces are cooled that low in buildings, even allowing for typical cold air leakage into interstitial spaces and the frequently less-than-perfect insulation of pipes, valves and duct work.

This specific limit is a compromise between energy and microbial growth concerns. Lower indoor dewpoints would further reduce risk. For example, a 55°F (13°C) maximum dewpoint is the guidance contained in the 2001 and 2008 ASHRAE Humidity Control Design Guide, and in Chapter 62 (Moisture Management in Buildings) and Chapter 23 (Museums, Galleries, Archives and Libraries) of the ASHRAE Handbook 2015—Applications. The 55°F dewpoint limit is also required for all high-performance buildings as defined by the 2017 Federal Facilities Standard (P-100) of the Public Buildings Service of the US General Services Administration. But a dewpoint limit of 55°F (13°C), while certainly an improvement appropriate for reducing risks and improving comfort in high-quality buildings, could also increase energy consumption in unoccupied buildings in highly humid climates, especially when a building is not airtight. A dewpoint limit of 60°F may provide a more affordable balance between the equally important concerns of reducing energy consumption while also reducing risks to occupant health from microbial growth.

This ISC adds an additional exception to allow for control of space humidity overnight rather than dewpoint. It also clarifies requirements in former 5.9.2.

[Note to Reviewers: This public review draft makes proposed independent substantive changes to the previous public review draft. 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 previous draft 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 substantive changes.]

Addendum ae to 62.1-2016

Modify Section 5.9 as shown below.

5.9 Maximum Indoor Air Dewpoint in Mechanically Cooled Buildings. Buildings or spaces equipped with or served by mechanical cooling equipment shall be provided with dehumidification components and~~/or~~ controls that limit the indoor humidity to a maximum dewpoint of 60°F (15°C) during both occupied and unoccupied hours whenever the outdoor air dewpoint is above 60°F (15°C). The dewpoint limit shall not be exceeded when system performance is analyzed with outdoor air at the dehumidification design condition (that is, design dewpoint and mean coincident dry bulb temperatures) and with the space interior loads (both sensible and latent) at cooling design values and space solar loads at zero.

Exceptions:
1. Buildings or spaces that are neither equipped with nor served by mechanical cooling equipment.
2. Buildings or spaces equipped with materials, assemblies, coatings and furnishings that resist microbial growth and that are not damaged by continuously high indoor air dewpoints.
3. During overnight unoccupied periods not exceeding 12 hours, the 60°F dew point limit shall not apply, provided that indoor relative humidity does not exceed 65% at any time during those hours.

Informative Note: Examples of spaces are shower rooms, swimming pool enclosures, kitchens, spa rooms or semi-cooled warehouse spaces that contain stored contents that are not damaged by continuously high indoor air dewpoints or microbial growth.

Informative Note: This requirement reduces the risk of microbial growth in buildings and their interstitial spaces because it limits the mass of indoor water vapor that can condense or be absorbed into mechanically cooled surfaces. The dewpoint limit is explicitly extended to unoccupied hours because of the extensive public record of mold growth in schools, apartments, dormitories and public buildings that are intermittently cooled during unoccupied hours when the outdoor air dewpoint is above 60°F (15°C).

Modify Section 5.9.2 as shown below. Renumber following sections.

5.10~~9.2~~ Building Exfiltration. Ventilation systems for a building equipped with or served by mechanical cooling equipment shall be designed such that the total building outdoor air intake equals or exceeds the total building exhaust under all load and dynamic reset conditions.

Exceptions:
1. Where an imbalance is required by process considerations and approved by the authority having jurisdiction, such as in certain industrial facilities.
2. When outdoor air dry-bulb temperature is below the indoor space dew-point design temperature.

Informative Note: Although individual zones within a building may be neutral or negative with respect to outdoors or to other zones, net positive mechanical intake airflow for the building as a whole reduces infiltration of untreated outdoor air.

BSR/ASHRAE Addendum af
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FOREWORD

The 2018 FGI (Facilities Guidelines Institute) guideline requires certain outpatient spaces to meet local ventilation codes and not ASHRAE/ASHE Standard 170: Neither one of the two mechanical model codes (IMC and UMC) has ventilation rates for these spaces. The IMC and UMC use ASHRAE Standard 62.1 as basis for their ventilation table.

This proposed addendum adds ventilation rates for those spaces in order to bridge the gap with ASHRAE/ASHE Standard 170. It was developed in consultation with FGI in order to understand the activity in each space.

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Addendum af to 62.1-2016

Modify the occupancy categories in Table 6.2.2.1 as shown below. The remainder of Table 6.2.2.1 is unchanged. Note that the Combined Outdoor Air Rate column in the current standard is not shown.

TABLE 6.2.2.1 Minimum Ventilation Rates in Breathing Zone
(Table 6.2.2.1 shall be used in conjunction with the accompanying notes.)

Occupancy Category	People Outdoor Air Rate R_p		Area Outdoor Air Rate R_a		Notes	Default Values		
						Occupant Density	Air Class	OS
	cfm/person	L/s•person	cfm/ft²	L/s•m²		#/1000 ft² or #/100 m²		
Outpatient Healthcare Facilities(1)(2)								
General Examination Room	7.5	3.8	0.12	0.6		20~~5~~	1	
Psychiatric Examination Room	5	2.5	0.06	0.3		20~~5~~	1	
Psychiatric Consultation Room	5	2.5	0.06	0.3		20~~5~~	1	
Psychiatric Group Room	5	2.5	0.06	0.3		50	1	
Psychiatric Seclusion Room	10	5	0.06	0.3		5	1	

Birthing Room	10	5	0.18	0.9	15	2
Urgent Care Examination Room	7.5	3.8	0.12	0.6	20~~5~~	1
Urgent Care Treatment Room	7.5	3.8	0.18	0.9	20~~5~~	1
Urgent Care Triage Room	10	5	0.18	0.9	20~~5~~	1
Urgent Care Observation Room	5	2.5	0.06	0.3	20~~5~~	1
Physical Therapy Individual room	10	5	0.06	0.3	20~~5~~	1
Physical Therapy Exercise Area	20	10	0.18	0.9	7	2
Physical Therapeutic Pool Area	--	--	0.48	2.4	--	2
Speech Therapy Room	5	2.5	0.06	0.3	20~~5~~	1
Prosthetics and Orthotics Room	10	5	0.18	0.9	20~~5~~	1
Dental Operatory	10	5	0.18	0.9	20~~5~~	1
Other Dental Treatment Areas	5	2.5	0.06	0.3	5	1
Class 1 Imaging Rooms	5	2.5	0.12	0.6	5	1

1. Outpatient facilities to which the rates apply are Freestanding Birth Centers, Urgent Care Centers Neighborhood Clinics and Physicians Offices, Class 1 Imaging Facilities, Outpatient Psychiatric Facilities, Outpatient Rehabilitation Facilities and Outpatient Dental Facilities
2. The requirements of this table provide for Acceptable Indoor air quality. The requirements of this Table do not address the airborne transmission of airborne viruses, bacteria and other infectious contagions.

BSR/ASHRAE Addendum ai
to ANSI/ASHRAE Standard 62.1-2016

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FOREWORD

This proposed addendum removes language published in Addendum q to Standard 62.1-2016. It reinstates the option of using indirect measurement techniques in testing and balancing (TAB) of the ventilation system in startup.

[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 ai to 62.1-2016

Modify Section 7.2.2 as shown below. See published Addendum q to 62.1-2016 posted for free download on the ASHRAE website at https://www.ashrae.org/technical-resources/standards-and-guidelines/standards-addenda.

7.2.2 Air Balancing and Verification of Outdoor Air Performance. Ventilation systems shall be balanced in accordance with ASHRAE Standard 111[15] or other applicable national standards, so as to verify conformance with the total outdoor airflow requirements of this standard (V_{ot}). ~~Conformance shall be confirmed by direct measurement at the minimum design airflow rate (or rates) during normal operation.~~

BSR/ASHRAE Addendum aj
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FOREWORD

The current standard is silent on producing ozone within HVAC equipment. In some countries, ozone generators are accepted as air cleaners. In a recent poll of members of SSPC62.1, only 2% thought that having ozone producing components in a ventilation system is consistent with acceptable indoor air quality.

Ozone is harmful for health and exposure to ozone creates risk for a variety of symptoms and diseases associated with the respiratory tract (Koren et al. 1989; Touloumi et al. 1997; Bell et al. 2004). Many products of ozone homogeneous and heterogeneous reaction processes also create risks for health, including formaldehyde, unsaturated aldehydes (produced during the reaction of ozone with ketones and alcohols), and ultrafine particles (secondary organic aerosols) (Weschler 2006).

Ozone emission is thus undesirable. However, there is no consensus on the safe level of ozone. For example, ASHRAE's Environmental Health Committee (2011b) issued an emerging issue brief suggesting "safe ozone levels would be lower than 10 ppb" and that "the introduction of ozone to indoor spaces should be reduced to as low as reasonably achievable (ALARA) levels." Still, even widely used guidelines are not entirely consistent with all available epidemiological literature on the effects of ozone, and there is relatively little known about the long-term effects of exposure to low concentrations of ozone.

The current state of the science regarding the health effects of ozone strongly suggests that the use of air cleaners that emit ozone by design should not be permitted; the same information and advice is given by the U.S. EPA, among others (EPA 2013). There is more uncertainty about recommendations for air cleaners that do not use ozone by design for air cleaning but produce ozone unintentionally, as a by-product of their operation. There are devices that emit ozone but at the same time reduce concentrations of other harmful contaminants. The state of the science does not allow making highly certain trade-offs between increased exposure to ozone and the ozone reaction by-products and reduced exposure to other contaminants.

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Addendum aj to 62.1-2016

Add new Section 5.7 as shown. Renumber following sections as appropriate.

5.7 Ozone Generating Devices. The use of ozone generating devices shall comply with the following sections.

Exception. Electronic devices used exclusively for the operation of HVAC equipment and controls.

***Informative Note**: Ozone generation is expected from ozone generators, corona discharge technology, some ultraviolet lights, electronic devices that create chemical reactions within the system, and some devices using a high voltage (>480v)*

5.7.1 Air Cleaning Devices. Air cleaning devices shall be listed and labeled in accordance with UL 2998.

Informative Note: *The use of devices not intended for air cleaning with the potential to generate ozone should be avoided.*

5.7.2 Ultraviolet Devices. Ultraviolet generating devices in supply air or spaces shall not transmit 185nm wavelengths.

Informative Note: *UV devices utilized in treatment of closed water systems may produce 185nm wavelengths which may generate ozone."*

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FOREWORD

The current standard allows leakage of 10% of class 2 air into outdoor air in Section 5.16.3.2.5. In a recent poll of members of SSPC62.1, only 23% thought that leaking air from nail salons, auto repair rooms, kitchens, parking garages, pet shops, and similar are consistent with acceptable indoor air quality.

This proposed addendum reduces the leakage to 5%. Leakage is measured as Exhaust Air Transfer Rate (EATR). From the AHRI-1060 database of air to air energy recovery:

- *Of the 670 plate and frame heat exchangers, 70 records show that the plates have exhaust air transfer ratio (EATR) The highest EATR = 3.7*
- *There are 1820 wheel records. 1040 of those are at 5% EATR or below*

More than half of the certified products are below the threshold of 5% EATR. Further, fan orientation and pressure design can reduce or eliminate the EATR in the system design.

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Addendum ak to 62.1-2016

Modify Section 5.16.3.2.5 as shown below.

5.16.3.2.5 Class 2 air shall not be recirculated or transferred to Class 1 spaces.

Exception: When using any energy recovery device, recirculation from leakage, carryover, or transfer from the exhaust side of the energy recovery device is permitted. Recirculated Class 2 air shall not exceed ~~10%~~ 5% of the outdoor air intake flow.

BSR/ASHRAE Addendum AL
to ANSI/ASHRAE Standard 62.1-2016

Public Review Draft

Proposed Addendum AL to Standard 62.1-2016, Ventilation for Acceptable Indoor Air Quality

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FOREWORD

The current standard has no requirements for accuracy of CO_2 sensors used for demand control ventilation. Various research projects show wide variation in accuracy and drift. This addendum proposes to adopt language from the 2013 California Title 24 Section 120.1(c)4.F.

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Addendum al to 62.1-2016

Add new Section 6.2.7.1.3 as shown. Renumber the existing sections as appropriate.

6.2.7.1.3. Where CO_2 sensors are used for DCV, the CO_2 sensors shall be certified by the manufacturer to be accurate within plus or minus 75 ppm at a 600 ppm and 1000 ppm concentration when measured at sea level at 25°C. Sensors shall be factory calibrated and certified by the manufacturer to require calibration not more frequently than once every 5 years. Upon detection of sensor failure, the system shall provide a signal that resets the ventilation system to supply the required minimum quantity of outdoor air (V_{bz}) to the breathing zone for the design zone population (P_z).

Modify Inspection/Maintenance Task ad in Table 8.2 as shown below. The remainder of Table 8.2 is unchanged.

Table 8.2 Minimum Maintenance Activity and Frequency for Ventilation System Equipment and Associated Components

ad. Verify the accuracy of permanently mounted sensors whose primary function is outdoor air delivery monitoring, outdoor air delivery verification, or dynamic minimum outdoor air control, such as flow stations at an air handler and those used for demand control ventilation including CO_2 sensors. A sensor failing to meet the accuracy specified in the O&M Manual shall be recalibrated or replaced. Performance verification shall include output comparison to a measurement reference standard consistent with those specified for similar devices in ASHRAE Standard 41.2 or ASHRAE Standard 111[15].

BSR/ASHRAE Addendum am
to ANSI/ASHRAE Standard 62.1-2016

Public Review Draft

Proposed Addendum am to Standard 62.1-2016, Ventilation for Acceptable Indoor Air Quality

First Public Review (January 2019)
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FOREWORD

When Addendum r to 62.1-2016 was published, the footnote to old Table 5.16.1 (Airstreams or Sources) did not transfer to new the Table 6.5.2 (Airstreams or Sources). This proposed addendum reinstates the note into Section 6.

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Addendum am to 62.1-2016

Add Section 6.5.1.1 as shown below. Renumber the existing sections as appropriate.

6.5.1.1. **Laboratory Hoods.** Exhaust from Laboratory hoods shall be Air Class 4 unless determined otherwise by the Environmental Health and Safety professional responsible to the owner or to the owner's designee.

BSR/ASHRAE Addendum an
to ANSI/ASHRAE Standard 62.1-2016

Public Review Draft

Proposed Addendum an to Standard 62.1-2016, Ventilation for Acceptable Indoor Air Quality

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FOREWORD

Table 6.2.2.1 (Minimum Ventilation Rates in Breathing Zone) includes educational space types including Classroom (age 9 plus) and Lecture Classroom. The first of these does not have note H assigned and ventilation shutoff is not allowed. Lecture Classroom has note H and ventilation shutoff is allowed. However, for college buildings, it is not clear which of these space types should be assigned to the classroom spaces. This proposed addendum will clarify that college classrooms may use note H and have the ventilation shut off when they are unoccupied. This control type would also apply to other post-secondary classrooms, such as classrooms that are in a variety of building types including classrooms in office buildings.

The rationale for combining lecture halls and post-secondary classrooms is that these are areas where room generated emissions are small – they typically have hard surfaces and do not include painting supplies etc. Note that Table 6.2.2.1 has different space types specifically called out for other classroom spaces which might contain materials that off gas regardless of level of occupancy; these include: daycare, classrooms for younger students, art classrooms, science laboratories, wood/metal shop, etc.

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Addendum an to 62.1-2016

Add new definitions to Section 3 as shown below. The remainder of Section 3 in unchanged.

3. DEFINITIONS (SEE FIGURES 3.1)

classroom: a space for instruction in which the instructor regularly occupies and stores supplies in the space.

classroom, lecture: a space for instruction in which all occupants are interim and no supplies are stored in the space.

BSR/ASHRAE Addendum ap
to ANSI/ASHRAE Standard 62.1-2016

Public Review Draft

Proposed Addendum ap to Standard 62.1-2016, Ventilation for Acceptable Indoor Air Quality

First Public Review (February 2019)
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FOREWORD

This proposed addendum updates some of the edition year and web references to the references listed in Section 9 and Informative Appendix J.

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Addendum ap to 62.1-2016

Modify Section 9 as shown below.

9. REFERENCES

1. *National Ambient Air Quality Standards*, Code of Federal Regulations, Title 40 Part 50 (40 CFR 50). U.S. Environmental Protection Agency. Electronic code of Federal Regulations. ~~www.epa.gov/air/criteria.html, accessed June 27, 2015.~~ https://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr50_main_02.tpl accessed December 19,2018

5. *ASTM D3273-~~12~~16, Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber*. West Conshohocken, PA: American Society for Testing and Materials.

6. *ANSI/AIHA Z9.5-~~2013~~2012, Standard for Laboratory Ventilation.* Fairfax, VA: American Industrial Hygiene Association.

7. *ANSI Z223.1/NFPA-54-~~2015~~2018, National Fuel Gas Code*. Quincy, MA: National Fire Protection Association.

8. *NFPA-31-~~2011~~2016, Standard for the Installation of Oil-Burning Equipment*. Quincy, MA: National Fire Protection Association.

9. *NFPA-211-~~2013~~2019, Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances.* Quincy, MA: National Fire Protection Association.

10. *UL 1995, Heating and Cooling Equipment,* ~~4~~5th Edition, ~~2011~~2015. Northbrook, IL: Underwriters Laboratories.

11. *AMCA 500-L-~~12~~15, Laboratory Methods of Testing Louvers for Rating.* Arlington Heights, IL: Air Movement and Control Association International, Inc.

12. *ANSI/ASHRAE Standard 52.2-~~2012~~2017, Method of Testing General Ventilation Air-Cleaning Devices for RemovalEfficiency by Particle Size.* Atlanta: ASHRAE.

13. NSF/ANSI 60-~~2013~~2016, *Drinking Water Treatment Chemicals—Health Effects.* Ann Arbor, MI: NSF International.

14. *Secondary Direct Food Additives Permitted In Food For Human Consumption.* Code of Federal Regulations, Title 21 Part 173.310 (21 CFR 173.310), *Boiler Water Additives*. U.S. Food and Drug Administration, ~~2012~~2018.

15. *ANSI/ASHRAE Standard 111-2008 (RA 2017), Measurement, Testing, Adjusting, and Balancing of Building HVAC Systems.*
Atlanta: ASHRAE.

19. *NFPA-90A-~~2012~~2018, Standard for the Installation of Air-Conditioning and Ventilating Systems.* Quincy, MA:
National Fire Protection Association.

20. *NFPA-90B-~~2012~~2018, Standard for the Installation of Warm Air Heating and Air-Conditioning Systems.* Quincy,
MA: National Fire Protection Association.

Modify Informative Appendix J as shown below.

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INFORMATIVE APPENDIX J
INFORMATIVE REFERENCES

J1. *Industrial Ventilation: A Manual of Recommended Practice*, ~~28th~~ 29th Edition, ~~2012~~2016. American Conference of Governmental Industrial Hygienists (ACGIH), Committee on Industrial Ventilation, Lansing, MI.

J2. ~~*2015*~~ *2019 ASHRAE Handbook—HVAC Applications.* Atlanta: ASHRAE.

J3. ~~2013~~ 2015 *ASHRAE Laboratory Design Guide.* Atlanta: ASHRAE.

J4. *NSF/ANSI 49-~~2012~~2016, Biological Safety Cabinetry: Design, Construction, Performance and Field Certification.*Ann Arbor, MI: National Sanitation Foundation International.

J5. *AMCA 511-~~13~~10(Rev. 2016), Certified Ratings Program—Product Rating Manual for Air Control Devices*. Arlington Heights, IL: Air Movement and Control Association International, Inc.

~~J6. *AMCA 500-L-12, Laboratory Methods of Testing Louvers for Rating.* Arlington Heights, IL: Air Movement and
Control Association International, Inc.~~

BSR/ASHRAE Addendum aq
to ANSI/ASHRAE Standard 62.1-2016

Public Review Draft

Proposed Addendum aq to Standard 62.1-2016, Ventilation for Acceptable Indoor Air Quality

First Public Review (February 2019)
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FOREWORD

Many manufacturing occupancies do not use hazardous materials. This proposed addendum changes the air class for those spaces to air class 2. That allows the air to be recirculated to other similar manufacturing areas. Manufacturing spaces using hazardous materials will remain air class 3.

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Addendum aq to 62.1-2016

Modify Table 6.2.2.1 as shown below. The remainder of Table 6.2.2.1 is unchanged.

TABLE 6.2.2.1 Minimum Ventilation Rates in Breathing Zone

Occupancy Category	People Outdoor Air Rate R_p		Area Outdoor Air Rate R_a			Default Values			Air Class	OS (6.2.7.1.3)
						Occupant Density				
	cfm/person	L/s•person	cfm/ft²	L/s•m²		#/1000 ft² or #/100 m²				
Manufacturing where hazardous materials are not used	10	5.0	0.18	0.9		7			2	
~~General m~~Manufacturing where hazardous materials are used. (excludes heavy industrial and chemical processes ~~using chemicals~~)	10	5.0	0.18	0.9		7			3	

BSR/ASHRAE Addendum ar
to ANSI/ASHRAE Standard 62.1-2016

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FOREWORD

This proposed addendum modifies language in Informative Appendix E (Acceptable Mass Balance Equations for Use with the IAQ Procedure) to be consistent with the current IAQP. It also clarifies that the equations do not include any potential compounds added by the HVAC system.

[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 ar to 62.1-2016

Modify Informative Appendix E as shown below.

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INFORMATIVE APPENDIX E
ACCEPTABLE MASS BALANCE EQUATIONS FOR USE WITH THE IAQ PROCEDURE

When applying the IAQ Procedure from Section 6.3, mass balance analysis may be employed to determine outdoor air ventilation requirements to control concentrations to meet design targets ~~indoor contaminant levels~~.

Table E-1 presents mass balance equations for analysis of single-zone systems. Figures E-l and E-2 show representative single-zone systems. A filter may be located in the recirculated airstream (location A) or in the supply (mixed) airstream (location B). The equations do not account for sources within the HVAC system that may occur such as filter off-gassing, energy recovery carryover of specific gases, or generation of particles or compounds.

Variable-air-volume (VAV) single-zone systems reduce the circulation rate when the thermal load is lower than the design load. This is accounted for by a flow reduction fraction (F_r).

A mass balance equation for each design compound or PM2.5 ~~the contaminant of concern~~ may be written and used to determine the required outdoor airflow or the breathing zone ~~contaminant~~ resultant concentration for the various system arrangements. Six permutations for air-handling and single-zone air distribution systems are described in Table E-l. The mass balance equations for computing the required outdoor airflow and the breathing-zone contaminant concentration at steady-state conditions for each single-zone system are presented in Table E-l.

If the allowable breathing zone ~~contaminate concentration~~ design target is specified, the equations in Table E-l may be solved for the zone outdoor airflow rate (V_{OZ}). When the zone outdoor airflow rate is specified, the equations may be solved for the resulting breathing zone design compound or PM2.5 concentration.

While the calculation methods in this appendix are based on single-zone systems and steady-state analysis, calculation methods that account for multiple-zone and transient effects are also available.[E-1]

TABLE E-1 Required Zone Outdoor Airflow or Space Breathing Zone Contaminant Concentration with Recirculation and Filtration for Single-Zone Systems

Required Recirculation Rate				
Filter Location	**Flow**	**Outdoor Airflow**	**Required Zone Outdoor Airflow (V_{oz} in Section 6)**	**Breathing Zone Contaminant Concentration**
None	VAV	100%	$V_{oz} \quad \frac{N}{E_z F_r \ C_{bz} \quad C_o}$	$C_{bz} \quad C_o \quad \frac{N}{E_z F_r V_{oz}}$
A	Constant	Constant	$V_{oz} \quad \frac{N \quad E_z R V_r E_f C_{bz}}{E_z \ C_{bz} \quad C_o}$	$C_{bz} \quad \frac{N \quad E_z V_{oz} C_o}{E_z \ V_{oz} \quad R V_r E_f}$
A	VAV	Constant	$V_{oz} \quad \frac{N \quad E_z F_r R V_r E_f C_{bz}}{E_z \ C_{bz} \quad C_o}$	$C_{bz} \quad \frac{N \quad E_z V_{oz} C_o}{E_z \ V_{oz} \quad F_r R V_r E_f}$
B	Constant	Constant	$V_{oz} \quad \frac{N \quad E_z R V_r E_f C_{bz}}{E_z \ C_{bz} \quad 1 \quad E_f \quad C_o}$	$C_{bz} \quad \frac{N \quad E_z V_{oz} \ 1 \quad E_f \ C_o}{E_z \ V_{oz} \quad R V_r E_f}$
B	VAV	100%	$V_{oz} \quad \frac{N}{E_z F_r \ C_{bz} \quad 1 \quad E_f \quad C_o}$	$C_{bz} \quad \frac{N \quad E_z F_r V_{oz} \ 1 \quad E_f \ C_o}{E_z F_r V_{oz}}$
B	VAV	Constant	$V_{oz} \quad \frac{N \quad E_z F_r R V_r E_f C_{bz}}{E_z \ C_{bz} \quad 1 \quad E_f \quad C_o}$	$C_{bz} \quad \frac{N \quad E_z V_{oz} \ 1 \quad E_f \ C_o}{E_z \ V_{oz} \quad F_r R V_r E_f}$

Symbol or Subscript	**Definition**
A, B	filter location
V	volumetric flow
C	contaminant concentration
E_z	zone air distribution effectiveness
E_f	filter efficiency
F_r	design flow reduction fraction
N	contaminant generation rate
R	recirculation flow factor
Subscript: *o*	outdoor
Subscript: *r*	return
Subscript: *b*	breathing
Subscript: *z*	zone

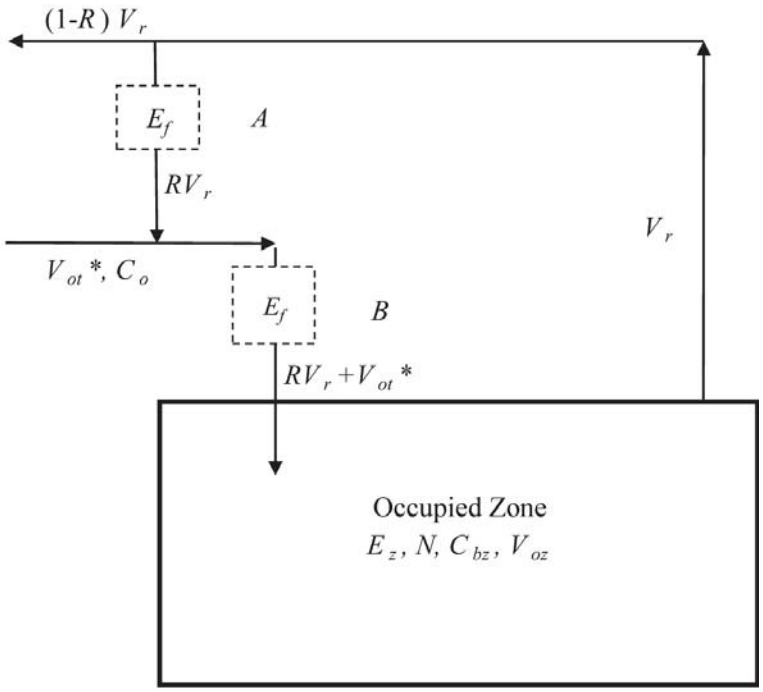

FIGURE E-1 Ventilation system schematic—constant volume system with no infiltration/exfiltration. (*V_{ot} = V_{oz} for single-zone systems.)

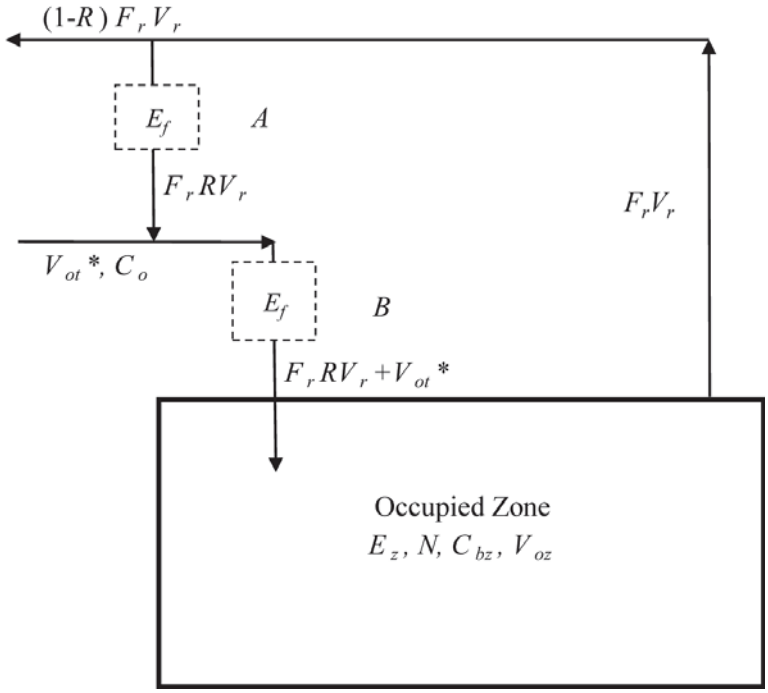

FIGURE E-2 Ventilation system schematic—variable air volume system with no infiltration/exfiltration. (*V_{ot} = V_{oz} for single-zone systems.)

REFERENCE

E-1. Dols, W.S., and G.N. Walton. 2002. CONTAMW 2.0 User Manual. National Institute of Standards and Technology, NISTIR 6921.

BSR/ASHRAE Addendum as to ANSI/ASHRAE Standard 62.1-2016

Public Review Draft

Proposed Addendum as to Standard 62.1-2016, Ventilation for Acceptable Indoor Air Quality

First Public Review (February 2019)
(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 standard, go to the ASHRAE website at www.ashrae.org/standards-research--technology/public-review-drafts 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 website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at www.ashrae.org/bookstore or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

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ASHRAE, 1791 Tullie Circle, NE, Atlanta GA 30329-2305

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FOREWORD

This proposed addendum adds a reference to ASHRAE/ASHE Standard 170 and exception to direct users to use the ventilation rates in ASHRAE/ASHE Standard 170 for asepsis and odor control for healthcare spaces listed in ASHRAE/ASHE Standard 170.

[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 as to 62.1-2016

Modify Section 6 as shown below.

6.2.2 Zone Calculations. Ventilation zone parameters shall be determined in accordance with Sections 6.2.2.1 through 6.2.2.3 for ventilation zones served by the ventilation system, except that the ventilation rates from ASHRAE/ASHE Standard 170[21] shall be used for the occupancy categories within the scope of ASHRAE/ASHE Standard 170[21].

Informative Note: The ventilation rates in ASHRAE/ASHE Standard 170 are intended to achieve asepsis and control odor migration and might not be adequate to achieve acceptable indoor air quality as defined in Standard 62.1.

Add a new reference to Section 9 as shown below.

9. REFERENCES

21. *ANSI/ASHRAE/ASHE Standard 170-2017, Ventilation for Healthcare Facilities.* Atlanta: ASHRAE.

BSR/ASHRAE Addendum p
to ANSI/ASHRAE Standard 62.1-2016

Public Review Draft

Proposed Addendum p to Standard 62.1-2016, Ventilation for Acceptable Indoor Air Quality

First Public Review (February 2019)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

The current standard contains exceptions for leakage from energy recovery systems. These exceptions have been misinterpreted and misapplied. The current definition of energy recovery ventilation systems is not used, and the term energy recovery device is not defined. The definition is therefore modified.

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Addendum p to 62.1-2016

Modify the definition in Section 3 as shown below.

energy recovery device ~~ventilation system~~: a device or combination of devices or system to transfer heat and/or water vapor between separate outdoor and exhaust airstreams. ~~applied to provide the outdoor air for ventilation in which energy is transferred between the intake and exhaust airstreams.~~

Modify Section 5.16.3.2.5 as shown below.

5.16.3.2.5 Class 2 air shall not be recirculated or transferred to Class 1 spaces.

Exception: When using any energy recovery device, recirculation from leakage, carryover, or transfer from the exhaust side of the energy recovery device is permitted, but shall not be counted as outdoor air. Recirculated Class 2 air shall not exceed 10% of the outdoor air intake flow at the design static pressure differential.

Modify Section 5.16.3.3.2 as shown below

5.16.3.3.2 Class 3 air shall not be recirculated or transferred to any other space.

Exception: When using any energy recovery device, recirculation from leakage, carryover, or transfer from the exhaust side of the energy recovery device is permitted but shall not be counted as outdoor air. Recirculated Class 3 air shall not exceed 5% of the outdoor air intake flow at the design static pressure differential.

BSR/ASHRAE Addendum y
to ANSI/ASHRAE Standard 62.1-2016

Public Review Draft

Proposed Addendum y to Standard 62.1-2016, Ventilation for Acceptable Indoor Air Quality

Third Public Review (February 2019)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

Since the original publication of Standard 62.1, ASHRAE published Standard 188-2015 Legionellosis: Risk Management for Building Water Systems. This proposed addendum requires advising the owner of the basic requirements of ASHRAE Standard 188.

[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 y to 62.1-2016

Add new Section 5.18 as follows

5.18 Legionella Risk. The building owner shall be provided with written documentation of the design information for all of the HVAC-related water systems and elements that are required to be addressed by ANSI/ASHRAE Standard 188[X].

Informative Note: Typical elements of the HVAC system addressed by Standard 188 include: open- and closed-circuit cooling towers and evaporative condensers that provide cooling or refrigeration for the HVAC system and humidification systems. This requirement is related to HVAC's influence on Legionnaires' Disease risk, but it is important to note that there are multiple sources of potential water-to-people transmission inside buildings that are potable water based, such as shower heads, some humidifiers, and ice machines, as well as non-potable sources that are not associated with HVAC, such as decorative water features.

Add a new reference to Section 9 as shown below. The remainder of Section 9 is unchanged.

9. References

X. *ANSI/ASHRAE Standard 188-2018, Legionellosis: Risk Management for Building Water Systems*. Atlanta: ASHRAE.

BSR/ASHRAE Addendum t
to ANSI/ASHRAE Standard 62.2-2016

Public Review Draft

Proposed Addendum t to Standard 62.2-2016, Ventilation and Acceptable Indoor Air Quality in Residential Buildings

Second Public Review (January 2019)
(Draft Shows Proposed Independent Substantive Changes to Previous Public Review Draft)

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BSR/ASHRAE Addendum t to ANSI/ASHRAE Standard 62.2-2016, *Ventilation and Acceptable Indoor Air Quality in Residential Buildings*
Second Independent Substantive Change Public Review Draft

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FOREWORD

This proposed change removes the potential for people to claim they would have installed a balanced system to avoid installing an unbalanced system. It also aligns the maximum airflow requirement that precludes the need to install a fan between new and existing homes.

[Note to Reviewers: This public review draft makes proposed independent substantive changes to the previous public review draft. 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 previous draft 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 substantive changes.]

Addendum t to 62.2-2016

Revise Section 4.1.2 as shown below. Refer to Addenda l and s to 62.2-2016 for published changes to Section 4.1.2. Published addenda are available for free on the ASHRAE website at https://www.ashrae.org/technical-resources/standards-and-guidelines/standards-addenda.

4.1.2 Infiltration Credit. If a blower door test has been performed then a credit for estimated infiltration may be taken for nonattached dwelling units using either the procedure in Section 4.1.2.1 or 4.1.2.2. Horizontally attached single-family dwelling units shall be permitted to utilize a blower door test result that includes common walls to take this credit, subject to the reduction factor A_{est} in Equation 4.2.

If this credit is taken, then the Required Mechanical Ventilation Rate (Q_{fan}) shall be calculated using Equation 4.2

$$Q_{fan} = Q_{tot} - \Phi\,(Q_{inf} \times A_{ext}) \qquad (4.2)$$

where
Q_{fan} = required mechanical ventilation rate, cfm (L/s)
Q_{tot} = total required ventilation rate, cfm (L/s)
Q_{inf} = infiltration, cfm (L/s) (see Normative Appendix A for exceptions for existing buildings)
A_{ext} = 1 for single-family detached homes, or the ratio of exterior envelope surface area that is not attached to garages or other dwelling units to total envelope surface area for single-family attached homes
Φ=1 for balanced ventilation systems and Q_{inf}/Q_{tot} otherwise

Exception: Where Q_{fan}, calculated for unbalanced ventilation, is less than or equal to 15 cfm (7 L/s), then a ~~neither balanced nor unbalanced~~ dwelling-unit ~~mechanical~~ ventilation system is not required.

BSR/ASHRAE/ASHE Addendum c
to ANSI/ASHRAE/ASHE Standard 170-2017

Public Review Draft

Proposed Addendum c to Standard 170-2017, Ventilation of Health Care Facilities

First Public Review (February 2019)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

This proposed addenda provides guidance to users of Standard 170 on how to incorporate air classifications into their design of Standard 170 spaces if they are required to utilize them in conjunction with ASHRAE Standard 62.1.

[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 170-2017

Add new Informative Appendix B – Air Classifications. Re-letter current appendices accordingly.

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Informative Appendix B
Air Classifications

ASHRAE Standard 62.1 categorizes spaces into air classifications and prevents the recirculation and transfer of air under many conditions from spaces with higher air classifications to spaces with lower air classifications based on Section 5.16 of ASHRAE Standard 62.1. This appendix includes guidelines on how to apply air classifications to ASHRAE/ASHE Standard 170 spaces.

1) Air classifications should be applied as indicated below and in accordance with ASHRAE Standard 62.1[1] Section 5.16.
2) Recirculation allowances by room units shall be in accordance with the room recirculation requirements of Tables 7.1, 8.1, and 9.1.and ASHRAE 62.1 Section 5.16. *Informative note: This should not be construed to prevent room recirculation of air within the same space when permitted by ASHRAE/ASHE 170 but prevented by ASHRAE 62.1 air classifications.*
3) Energy recovery devices serving Standard 170 spaces should meet the requirements of Section 6.8 of Standard 170.
4) Spaces in Tables 7.1, 8.1, and 9.1 requiring 100% exhaust air should be class 3 air.
    1) Exception: Spaces listed in Section 6.3.2.1 should be class 4 air.
    2) Exception: For spaces with class 3 and 4 air, room recirculation should be as

permitted by HEPA filtration when indicated in Tables 7.1, 8.1, and 9.1 and associated notes.

5) Spaces requiring negative pressure but not 100% exhaust air should be class 2 air. The following list of spaces should also be considered class 2 air:
    1) Resident gathering/activity/dining (mild odor contaminants)
    2) Resident room in skilled nursing facilities (mild odor contaminants)
    3) Resident unit corridor in skilled nursing facilities (mild odor contaminants)
    4) Laboratory work area, media transfer (mild odor contaminants)
    5) Special examination room (biological concerns)
    6) Pharmacy (mild odor contaminants)
6) All other spaces should be class 1 air.

BSR/ASHRAE/ASHE Addendum d
to ANSI/ASHRAE/ASHE Standard 170-2017

Public Review Draft

Proposed Addendum d to Standard 170-2017, Ventilation of Health Care Facilities

First Public Review (February 2019)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

This proposed addendum adds requirements and language similar to those required in Section 5 (Systems and Equipment) of ASHRAE Standard 62.1. Requirements include:

1. *Air intake separation distance table adapted for 170 requirements.*
2. *Outdoor air verification requirements while operating.*
3. *Measures to prevent vehicle combustion in parking garages from entering the building.*
4. *Air balancing requirements.*

[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 170-2017

Modify 6.3 Outdoor Air Intakes and Exhaust Discharges as shown below. The remainder of Section 6.3 is unchanged.

6.3.1 Outdoor Air Intakes

6.3.1.1 General. ~~Outdoor air intakes for AHUs shall be located a minimum of 25 ft (8 m) from cooling towers and all exhaust and vent discharges. Outdoor air intakes shall be located such that the bottom of the air intake is at least 6 ft (2m) above grade.~~ Outdoor air intakes for AHU shall be located such that the shortest distance from the intake to any specific potential outdoor contaminant source shall be equal to or greater than the separation distance listed in Table 6.3.1.1 and comply with all other requirements of this section. New facilities with moderate-to-high risk of natural or man-made extraordinary incidents shall locate air intakes away from public access. All intakes shall be designed to prevent the entrainment of wind-driven rain, shall contain features for draining away precipitation, and shall be equipped with a birdscreen of mesh no smaller than 0.5 in. (13 mm).

Exception to 6.3.1.1: For gas fired, packaged rooftop units, the separation distance of the unit's outdoor air intake from its flue may be less than 25 ft (8 m). The separation distance shall be greater than or equal to the distance prescribed in ANSI/ASHRAE Standard 62.1, Section 5.5.1.2.

6.3.1.1.1 Exhaust/Relief Outlets. Separation criteria for required exhaust from Table 7.1, 8.1, or 9.1, Class 2, and Class 3 exhaust/relief outlets applies to the distance from the outdoor air intakes for one ventilation system to the exhaust outlets and relief outlets for any other ventilation system.

\

Table 6.3.1.1 Air Intake Minimum Separation Distance

Object	Minimum Distance, ft (m)
Class 2 air exhaust/relief outlet	10 (3)
Required exhaust from table 7.1, 8.1, or 9.1 or Class 3 air exhaust/relief outlet	25 (7.5)
Required exhaust from section 6.3.2.2 or Class 4 air exhaust/relief outlet	30 (10)
Plumbing vents terminating less than 3 ft (1 m) above the level of the outdoor air intake	20 (6)
Plumbing vents terminating at least 3 ft (1 m) above the level of the outdoor air intake	6 (1.9)
Vents, chimneys, and flues from combustion appliances and equipment	25(7.5)
Garage Entry, automobile loading area, or drive-in queue	15 (5)
Truck loading area or dock, bus parking/idling area	25 (7.5)
Driveway, landscaped grade, street, or parking place	6 (1.9)
Thoroughfare with high vehicle traffic volume	25 (7.5)
Roof or other above-grade surface directly below intake	3 (1)
Garbage storage/pick-up area, dumpsters	15 (5)
Cooling tower intake or basin	15 (5)
Cooling tower exhaust	25 (7.5)

6.3.1.2 Outdoor Air Ventilation System Controls. Mechanical ventilation systems shall include controls in accordance with the following subsections.

6.3.1.2.1 All systems shall allow for field verification of outdoor air intake flow during operation and be provided with manual or automatic controls to maintain not less than the outdoor air intake flow required by Section 7, Section 8, and Section 9 under all load conditions or unoccupied turndown conditions.

6.3.1.2.2 Systems with fans supplying variable primary air including single-zone VAV and multiple-zone recirculating VAV systems, shall be provided with any combination of control equipment, methods, or devices to maintain no less than the outdoor air intake flow required for compliance with section 6.3.1.2.1.

~~**6.3.1.2**~~**6.3.1.3 Relief Air.** Relief air is exempt from the 25 ft (8 m) separation requirement. Relief air is defined as ~~the Class 1~~ air that could be returned to the air-handling unit from the occupied spaces but is being discharged to the outdoors to maintain building pressurization (such as during air-side economizer operation).

Informative Note: For more information, see ASHRAE Standard 62.1 (ASHRAE 2016a) in Appendix B.

~~**6.3.1.3Roof Locations.** Intakes on top of buildings shall be located with the bottom of the air intake a minimum of 3 ft (1 m) above roof level.~~

6.3.1.4 Areaways. […]

6.3.2 Exhaust Discharges
[…]

6.3.2.3 Buildings with attached Parking Garages. In order to limit the entry of vehicular exhaust into occupiable spaces, buildings with attached parking garages shall be designed to

a. Maintain the garage pressure at or below the pressure of the adjacent occupiable spaces.
b. Use a vestibule to provide an airlock between the garage and the adjacent occupiable spaces, or
c. Otherwise limit migration of air from the attached parking garage into the adjacent occupiable spaces of the building in a manner acceptable to the authority having jurisdiction.

6.3.3 Combustion Air. Fuel-burning appliances, both vented and unvented, shall be provided with air for combustion and removal of combustion products in accordance with manufacturer instructions. Products of combustion from vented appliances shall be vented directly outdoors.

Add new Section 6.7.6 Air Balancing and 6.7.7 Building Exfiltration as shown below.

6.7.6 Air Balancing

6.7.6.1 Designing for Air Balancing. The ventilation air distribution system shall be provided with means to adjust the system to achieve at least the minimum ventilation airflow as required by Section 7, Section 8, and Section 9 under any load condition.

6.7.6.2 Plenum Systems. When the ceiling or floor plenum is used to recirculate return to ceiling-mounted or floor-mounted terminal units the plenum system shall not be used to distribute outside air.

Informative Note: Systems with direct connection of ventilation air ducts to terminals units, for example, comply with this requirement

6.7.6.3 Documentation. The design documents shall specify minimum requirements for air balance testing or reference applicable national standards for measuring and balancing airflow. Design criteria that were used in the design with respect to ventilation rates and air distribution shall be made available to the Authority Having Jurisdiction upon request.

6.7.7 Building Exfiltration. Outdoor Air ventilation systems for a building shall be designed such that the total building outdoor air intake equals or exceeds the total building exhaust under all load and unoccupied turndown conditions.

Exceptions: Where an imbalance is required by process considerations and approved by the authority having jurisdiction.

Modify Section 6.9 Insulation and Duct Lining as shown below.

6.9 Insulation and Duct Lining

a. ~~An exterior vapor barrier shall be provided for insulation on cold surfaces.~~ Pipes, ducts, and other surfaces within the building whose surface temperatures are expected to fall below the surrounding dew-point temperature shall be insulated to prevent condensation and provided with an exterior vapor barrier. A vapor barrier is not required for insulation materials that do not absorb or transmit moisture.
b. Existing insulation and duct lining accessible during a renovation project shall be inspected, repaired, and/or replaced as appropriate.
c. Duct lining shall not be used in ductwork located down-stream of Filter Bank No. 2. Duct lining with an impervious cover may be allowed in terminal units, sound attenuators, and air distribution devices downstream of Filter Bank No. 2. This lining and cover shall be factory installed.
d. Duct lining shall not be installed within 15 ft (4.57 m) downstream of humidifiers.

BSR/ASHRAE/ASHE Addendum p
to ANSI/ASHRAE/ASHE Standard 170-2017

Public Review Draft

Proposed Addendum p to Standard 170-2017, Ventilation of Health Care Facilities

Second Public Review (February 2019)
(Draft Shows Proposed Independent Substantive Changes to Previous Public Review Draft)

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FOREWORD

A summary of proposed Addendum p original changes:

1. *Create a column indicating spaces where unoccupied turndown is acceptable.*
2. *Incorporate Table 6.4 into Table 7.1 to remove confusion so that filter requirements will be uniformly applied.*
3. *Revise space names to align with names appearing in FGI 2014 and indicating the appropriate sections in FGI 2014 where that space is referenced.*

Based on commenter feedback the following additional changes are proposed:

1. *In paragraph 7.1(a)(3) the term "humidity" is changed to the phrase "design relative humidity"*
2. *Some spaces previously marked as not permitting unoccupied turndown are being changed to permit unoccupied turndown.*
3. *Some of the proposed new spaces would not be added to the standard.*
4. *Addendum a are proposed changes to the filter column created in this addendum and represents and updated approach to filtration in healthcare facilities. Users of the standard are encouraged to direct filter comments to Addendum a because the new values in addendum a will replace the column values added in Addendum p.*

[Note to Reviewers: This public review draft makes proposed independent substantive changes to the previous public review draft. 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 previous draft 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 substantive changes.]

Addendum p to 170-2013

Revise Section 7.1.a.3 as shown below. The remainder of Section 7.1 is unchanged.

7.1 General Requirements. The following general requirements shall apply for space ventilation:

a. Spaces shall be ventilated according to Table 7.1.

[…]

3. For design purposes, the minimum number of total air changes indicated shall be either supplied for positive pressure rooms or exhausted for negative pressure rooms. Spaces that are required in Table 7.1 to be at a negative pressure relationship and are not required to be exhausted shall utilize the supply airflow rate to compute the minimum total air changes per hour required. Except where indicated by a "No" in the Unoccupied Turndown column, the number of air

changes shall be permitted to be reduced and temperature and design relative humidity altered when the space is unoccupied, provided that the required pressure relationship to adjoining spaces is maintained while the space is unoccupied and that the minimum number of air changes, temperature and design relative humidity indicated are re-established anytime the space becomes occupied (Refer to Informative Appendix A for additional information.). Air change rates in excess of the minimum values are expected in some cases in order to maintain room temperature and design relative humidity conditions based upon the space cooling or heating load.

[…]

Revise Table 7.1 and its notes as shown below. Table 7.1 and the notes may be modified by addenda to Standard 170-2017 currently published for free on the ASHRAE website at http://www.ashrae.org/standards-research--technology/standards-addenda.

TABLE 7.1 Design Parameters For Inpatient Spaces

Function of Space (aa)	Pressure Relationship to Adjacent Areas (n)	Minimum Outdoor ach	Minimum Total ach	All Room Air Exhausted Directly to Outdoors (j)	Air Recirculated by Means of Room Units (a)	Unoccupied Turndown	Minimum Filter Efficiencies (bb)	Design Relative Humidity (k), %	Design Temperature (l), °F/°C
NURSING UNITS AND OTHER PATIENT CARE AREAS									
Emergency Department public waiting area (2.2-3.1.3.4)	Negative	2	12	Yes (q)	NR	Yes (ee) ~~No~~	8/14	max 60	70-75/21-24
Emergency service Triage area (2.2-3.1.3.3)	Negative	2	12	Yes (q)	NR	Yes ~~No~~	8/14	max 60	70-75/21-24
Emergency department human decontamination (2.2-3.1.3.6(8)	Negative	2	12	Yes	No	Yes ~~No~~	8/14	NR	NR
Radiology waiting rooms	Negative	2	12	Yes (q), (w)	NR	Yes (ee) ~~No~~	8/14	max 60	70-75/21-24
Emergency department exam/treatment room (2.2-3.1.3.6) (p)	NR	2	6	NR	NR	Yes ~~No~~	8/14	max 60	70-75/21-24
Patient toilet room (2.1-2.2.6)	Negative	NR	10	Yes	No	Yes ~~No~~	8/NR	NR	NR
~~Environmental Services Room (2.1-2.6.12)~~	~~Negative~~	~~NR~~	~~10~~	~~Yes~~	~~No~~	~~No~~	~~8/NR~~	~~NR~~	~~NR~~
Patient Care Area Corridor	NR	NR	2	NR	NR	Yes ~~No~~	8/14	NR	NR
DIAGNOSTIC AND TREATMENT									
~~CT scanner room (2.2-3.4.2.1)~~ Imaging (diagnostic and treatment)	NR	2	6	NR	NR	Yes	8/14	max 60	72-78/22-26
~~Radiography room (2.2-3.4.3.2)~~	~~NR~~	~~2~~	~~6~~	~~NR~~	~~NR~~	~~Yes~~	~~8/14~~	~~max 60~~	~~72-78/22-26~~
~~Radiography/fluoroscopy room (2.2-3.4.3.3)~~	~~NR~~	~~2~~	~~6~~	~~NR~~	~~NR~~	~~Yes~~	~~8/14~~	~~max 60~~	~~72-78/22-26~~
~~Mammography room (2.2-3.4.3.4)~~	~~NR~~	~~2~~	~~6~~	~~NR~~	~~NR~~	~~Yes~~	~~8/14~~	~~max 60~~	~~72-78/22-26~~
~~MRI scanner room (2.2-3.4.4)~~	~~NR~~	~~2~~	~~6~~	~~NR~~	~~NR~~	~~Yes~~	~~8/14~~	~~max 60~~	~~72-78/22-26~~
~~Ultrasound examination or procedure room (2.2-3.4.5)~~	~~NR~~	~~2~~	~~6~~	~~NR~~	~~NR~~	~~Yes~~	~~8/14~~	~~max 60~~	~~72-78/22-26~~
~~Interventional imaging recovery patient care area (2.2-3.5.3)~~	~~NR~~	~~2~~	~~6~~	~~NR~~	~~No~~	~~Yes~~	~~8/14~~	~~max 60~~	~~70-75/21-24~~
~~Radiosurgery treatment room (2.2-3.7.3.2)~~	~~NR~~	~~2~~	~~6~~	~~NR~~	~~NR~~	~~Yes~~	~~8/14~~	~~max 60~~	~~70-75/21-24~~
~~Proton therapy treatment room (2.2-3.7.4.2)~~	~~NR~~	~~2~~	~~6~~	~~NR~~	~~NR~~	~~Yes~~	~~8/14~~	~~max 60~~	~~70-75/21-24~~
Dialyzer reprocessing room	Negative	NR	10	Yes	No	Yes ~~No~~	8/NR	NR	NR
Nuclear medicine hot lab	Negative	NR	6	Yes	No	Yes ~~No~~	8/NR	NR	70-75/21-24
PATIENT SUPPORT FACILITIES									
~~Medication preparation room used to compound sterile preparations (b) (2.1-2.6.6.2e)~~	~~Positive~~	~~2~~	4	~~NR~~	~~NR~~	~~No~~	~~8/14~~	~~max 60~~	~~70-75/21-24~~
~~Pharmacy Services: Sterile Work Areas (b) (2.1-4.2.3)~~	~~Positive~~	~~2~~	4	~~NR~~	~~NR~~	~~No~~	~~8/14~~	~~max 60~~	~~70-75/21-24~~
Toilet room (2.1-4.3.9.1)	Negative	NR	10	Yes	No	Yes ~~No~~	8/NR	NR	~~72-78/22-26~~NR
OTHER GENERAL SUPPORT FACILITIES									
~~Soiled lined holding room (2.2-3.4.3.2)~~	~~Negative~~	~~NR~~	~~10~~	~~Yes~~	~~No~~	~~No~~	~~8/NR~~	~~NR~~	~~NR~~
Toilet (2.1-5.2.2.4.1)	Negative	NR	10	Yes	No	Yes ~~No~~	8/NR	NR	~~72-78/22-26~~NR
SUPPORT AREAS FOR NURSING UNITS AND OTHER PATIENT CARE AREAS									
Clean linen storage room (2.1-5.2.3.2)	Positive	NR	2	NR	NR	Yes ~~No~~	8/14	NR	72–78/22–26
Clean workroom (2.1-2.6.9.1)	Positive	2	NR	NR	NR	Yes ~~No~~	8/14	NR	NR
Clean supply room (2.1-2.6.9.2)	Positive	NR	NR	NR	NR	Yes ~~No~~	8/14	NR	NR

Note: NR = no requirement

ee. Include time-delay controls such that turndown does not occur for the first 20 minutes after the space becomes unoccupied.

IIAR 5

Public Review #2 Draft

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Note: This document shows substantive changes resulting from the first public review and from the open discussions during the latest Standards Committee Meeting held during the IIAR Annual Conference on March 3rd, 2019. Certain portions of the original text remain to provide the reader with some context and certain portions of the original text that were removed are not shown from editorial corrections or to prevent and avoid confusion. Note the section numbers when reviewing as they are not in full sequence. Sections and table content with no substantive changes were removed. You are invited to provide comments on only the striked-through (in Light Blue) or the underlined (in Light Blue) changes. Understand the content clearly before you submit a comment. Do not submit questions or opinions as comments. If you do not understand the content, contact the IIAR at 1-703-312-4200.

Legend:
1) New words are underlined and Light Blue.
2) Removed words are striked-through and ~~Light Blue~~.
3) Highlighted "Note Only" items are included.

Chapter 1. **Purpose, Scope, and Applicability**

1.1 **Purpose.**
This standard specifies minimum requirements for the startup of new or additions or modifications to a closed-circuit ammonia refrigeration systems.

1.3 **Applicability.** Note Only: Asterisk (*) added here to refer to added Appendix A, Section A.1.3)
*This standard applies to new installations, additions, or modifications to existing systems, and associated safety systems.

Chapter 3. **Normative References** Note Only: This is informative/included in Appendix F.

~~3.4 **International Safety Equipment Association (ISEA).**~~
~~Standard as follows:~~
~~**1.** ANSI/ISEA Z358.1, World Safety Standard for Emergency Eyewash and Shower Equipment (2014).~~

Chapter 5. **Pre-Charging Activities and Requirements**

5.1.1
A startup team shall be organized to perform the startup of the new system or additions or modifications to an existing system.

5.1.1.1
*At a minimum, the startup team shall include:
1. Owner or Owner's Designated Representative.

5.2.1
A ~~startup~~ plan shall be prepared~~.~~. ~~formally or informally based on a case-by-case basis,~~ The plan shall be application specific to execute the startup phase for a new ammonia refrigeration system or ~~an~~ the addition or modification to ~~an~~ the existing ammonia refrigeration system.

5.4.1
*In the United States, ammonia refrigeration systems that are subject to OSHA's Process Safety Management (PSM) standard and EPA's Risk Management Plan (RMP) program regulation are required to conduct a Pre-Startup Safety Review (PSSR) to ensure that safety and design issues are ~~taken care of~~ addressed before ammonia is added to a new facility or to an existing facility which has been modified. New ammonia refrigeration facilities subject to these regulations shall be analyzed by performing a formalized Process Hazard Analysis (PHA) ~~as part of the PSSR~~ prior to the introduction of ammonia refrigerant into a new system. Existing ammonia refrigeration systems ~~subject to these regulations~~ shall be analyzed by performing a ~~Safety and Health~~ Hazard Review ~~as part of the PSSR~~ on the portion of the system that is being ~~has been~~ modified prior to the startup of the modified portion of the system.

5.4.2
*~~New~~ Ammonia refrigeration systems that are not subject to ~~do not meet the threshold quantity set forth by~~ OSHA's PSM standard and the EPA's RMP program regulation shall be analyzed by performing a Hazard Review prior to the introduction of ammonia refrigerant into a new or modified system. ~~Existing ammonia refrigeration systems which are not subject to these regulations shall be analyzed by performing a Safety and Health Review on the portion of the system that has been modified prior to the startup of the modified system.~~

5.5.1.1
*The ammonia refrigeration system if new, or its' subsections if additions or modifications, shall be pressure tested, subsequently leak tested for tightness, and evacuated.

5.5.1.1.1
*Where closure welds are used, the integrity of the closure weld shall be verified prior to placing the system back into service.

5.5.2.1
A pre-test inspection shall be performed to verify that all equipment and components of the new, added, or modified portions of the ammonia refrigeration systems under examination have a pressure rating which meets the specified test pressure.

5.5.2.2.1
*All joints shall remain uninsulated, unpainted, and exposed until leak testing has been completed.

5.5.5.1
*The minimum pressure used for leak testing shall be either the design pressure or a pressure specified in the engineering design.

5.6 Mechanical System ~~Checkout~~ Inspections and Verification

5.7 Electrical System ~~Checkout~~ Inspections and Verification

5.7.1
Electrical ~~checkout~~ inspection and verification requirements shall apply to the ammonia refrigeration system and the associated safety systems.

5.8 Safety Systems ~~Checkout~~ Verification and Activation

5.8.1
The following shall be ~~checkout out~~ inspected and verified, tested, proven to function as designed, and put into….

5.8.2
Startup personnel shall have the appropriate equipment, and where necessary, be fit-tested and trained on the use of personal protective equipment (PPE).

5.8.4
An emergency action and/or response plan shall be developed and ~~tested~~ practiced.

5.9 Water and Secondary Coolant System ~~Checkout~~ Inspections and Verification

5.9.1
Systems where water is used for condensing, compressor cooling or oil cooling shall be ~~checkout~~ inspected and verified, tested, and put into operation prior to charging the refrigeration system with ammonia refrigerant.

5.9.2
Where secondary systems are employed, they shall be ~~checkout out~~ inspected and verified, tested, and made operational prior to charging that portion of the system with ammonia refrigerant.

~~5.10.2~~
~~Employees who are designated to maintain the ongoing integrity of the ammonia refrigeration system, equipment, and components shall be trained in an overview of the process and its hazards.~~

5.11.5
The pre-charging safety checklist shall be filled out confirming that all items are completed. The owner or owner's designated representative shall sign off on this document.

Chapter 6. Charging

6.1.1
The completion of all pre-charging requirements and activities shall be confirmed prior to charging the ammonia refrigeration system or the additions or modifications with ammonia refrigerant.

6.3.2
*An emergency eyewash and shower unit(s) shall be available. The travel time to reach the eyewash and shower unit(s) shall be within 10 seconds ~~or~~ (approximately 55 feet) ~~of the charging operation~~. The path to the eyewash and shower unit(s) shall be free of obstructions.

6.3.6
The charging or transfer process shall be attended at all times by an individual designated by the startup team.

6.4.1
A ~~C~~charging standard operating procedure (SOP) shall be utilized. ~~for compliance.~~

6.4.2
Ammonia vapor shall be introduced into new, added, or modified portions of the closed-circuit refrigeration system that has been held in a vacuum. ~~to reach, at a minimum, atmospheric pressure (0" Hg, 0 Psig).~~ After the introduction, the pressure shall be raised to 0" Hg or greater.

Chapter 7. **Startup Process**

7.1 **Equipment/System/Addition/Modification Startup**

7.2.1
All protection devices in the system/addition/modification shall be tested to prove correct functionality. Testing shall be done by a trained startup technician having the training and experience that qualify that individual to startup the designated closed-circuit ammonia refrigeration with which he or she has already become familiar.

7.2.3
The following protection devices ~~for~~ do not need to be tested prior to startup ~~do not include~~:

1. Internal relief devices.
2. Hydrostatic relief devices.

7.8.1
Startup documentation shall be provided to the owner or owner's designated representative.

7.8.2
Startup documentation, at a minimum, shall include applicable:

10. Refrigerant Charge Note Only: Added only Item 10.

Appendix A. (Informative) Explanatory Material

A.1.3
Additions and Modifications are described as either:

1. Any new attachment to an existing operating system, or system which has been in operation, which did not exist prior to the attachment; or
2. Any reconfiguration of any portion of the existing operating system, or system which has been in operation, to service a new or converted area which does not function in the same manner as before the conversion.
3. Any activity which requires pipe to be replaced due to non-wear and tear issues, pipe cut to fit, pipe welded or pipe threaded to reconnect sections of a closed-circuit ammonia refrigeration system.

An in-kind replacement of a component for maintenance reasons, such as a solenoid valve, is not an Addition or Modification to a closed-circuit ammonia refrigeration system.

When an Addition or Modification occurs to an existing operating system, or system which has been in operation, only the Addition or Modification itself are subject to the normative requirements of this document.

A.5.1.1.1
……The owner or owner's designated representative should stay engaged throughout the entire process…

A.5.4.1
Facilities subject to OSHA's Process Safety Management (PSM) and EPA's Risk Management Plan (RMP), that are modifying a portion of their ammonia refrigeration system, should evaluate if the change warrants a formal Process Hazard Analysis (PHA) as part of Management of Change (MOC). If a PHA is determined to not be warranted, a less formalized technique, such as a questionnaire, may be utilized. This is often referred to as a Safety & Health Assessment. ~~Facilities utilizing ammonia as a refrigerant to be operated in the United States are subject to OSHA and EPA General Duty Clause regulations. Ammonia refrigeration systems that will contain the Federal or State Threshold Quantity or more of ammonia inventory will be subject to OSHA's Process Safety Management (PSM) and EPA's Risk Management Plan (RMP).~~

A.5.4.2

For facilities not subject to OSHA's Process Safety Management (PSM) and EPA's Risk Management Plan (RMP), the Hazard Review may utilize one of the PHA techniques listed in those regulations. Alternatively, the Hazard Review may utilize a different technique, such as a questionnaire, often referred to as a Safety & Health Assessment. ~~Facilities utilizing ammonia as a refrigerant to be operated in the United States are subject to OSHA and EPA General Duty Clause regulations. Ammonia refrigeration systems that will not contain the Federal or State Threshold of ammonia inventory will not be subject to OSHA's Process Safety Management (PSM) and EPA's Risk Management Plan (RMP) but will be subject to both agencies' General Duty Clauses.~~

A.5.5.1.1.1

"Closure weld" is a term commonly applied to the final weld that connects an existing system to newly added piping. Newly-added piping can be isolated and pressure tested to prove integrity.

Verification of a closure weld is more challenging because pressure testing will be impractical in some cases. Where pressure testing in accordance with ASME B31.5 Section 538.4.1 can be performed, it is the preferred method of verification. Where it is impractical to pressure test a closure weld, such as where a closure weld is a "hot-tap" connection, weld integrity can be verified by one or more of the following non-destructive examination (NDE) methods or using other methods that are acceptable to the authority having jurisdiction (AHJ):

- Radiographic examination
- Ultrasonic examination
- Use of a liquid penetrant to identify a leak

Supplemental guidance on NDE methods for verification of closure welds can be found in ASME PCC-2, Article 5.2 *Nondestructive Examination in Lieu of Pressure Testing for Repairs and Alterations* and ANSI B31.3.

A.5.5.6.1

Continue evacuation to 5,000 microns (or 1,000 microns if compressed air is used).

When a pressure of 5,000 microns (or 1,000 microns if compressed air is used) has been reached…

A.7.2.2

~~For informative explanatory material, see Appendix F (Informative) Compressor High Pressure Cut-Out Testing and Calibration.~~ Note Only: Removed only this sentence from this section.

Appendix B. (Informative) Pre-Charging, Pre-Startup, & Startup Checklists

"Verify motor rotation is correct" was added to each Checklist

~~Appendix F (Informative) Compressor High Pressure Cut-Out Testing and Calibration~~

This Appendix was removed (Addressed by IIAR 6). Appendix G became Appendix F (Informative) References and Sources of References.

Tracking number 60i80r1
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Revision to NSF/ANSI/CAN 60 – 2018
Issue 80 Revision 1 (March 2019)

[Note – the changes are seen below using strikeout for removal of old text and gray highlights to show the suggested text. ONLY the highlighted text is within the scope of this ballot.**]**

NSF/ANSI/CAN Standard
for Drinking Water Treatment Chemicals– Health Effects

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4 Coagulation and flocculation chemicals

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The following table is a generic listing of the types of products covered in this section. This table is not intended to be a complete list of all products used for coagulation and flocculation applications. Inclusion of a product does not indicate either a use endorsement of the product or an automatic acceptance under the provisions of this Standard. Annex D, Table D1, includes a cross-reference index of the various chemicals (and the more common synonyms) contained in this table.

Table 4.1
Coagulation and flocculation products – Product identification and evaluation

Chemical type (description)	Synonyms	Formula (CAS number)	Approximate molecular weight	Preparation Method	Typical use level (mg/L)[1]	Minimum test batteries of chemistry-specific analyses[2]
.						
.						
.						
sodium aluminate (metal salt coagulant)	aluminum sodium oxide	$Na_2Al_2O_4$ (1302-42-7)	163.94	Method K, Annex B, Section B.3.12	43 / 26.8[7]	metals[5], base / neutral scan[6]
sodium silicate[12] (coagulant)	~~water glass~~ activated silica	$Na_2O(SiO_2)_n$ typically n = 3 (1344-09-8)	122 @ n = 1	Method A, Annex B, Section B.3.2	7.8	metals[5]
starch, anionic (coagulant)	starch, base-hydrolyzed	(68412-33-9)	—	—	10	metals[5]

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5 Chemicals for corrosion and scale control, softening, precipitation, sequestering, and pH adjustment

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The following table is a generic listing of the types of products covered in this section of the standard. This table is not intended to be a complete list of all products used for corrosion and scale control, softening, precipitation, sequestering, and pH adjustment. Inclusion of a product does not indicate either a use endorsement of the product or an automatic acceptance under the provisions of this Standard. Annex D, Table D.1 includes a cross-reference index of the various chemicals (and the more common synonyms) contained in this table.

Table 5.1
Chemicals for corrosion and scale control, softening, sequestering, precipitation, and pH adjustment – Product identification and evaluation

Chemical type (primary use)	Synonyms	Formula (CAS number)	Molecular weight (g)	Preparation method	Typical use level[1] (mg/L)	Minimum test batteries of chemistry-specific analyses[2]
.						
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.						
sodium sesquicarbonate (pH adjustment)	carbonic acid, sodium salt	$Na_2CO_3 \cdot NaHCO_3 \cdot 2H_20$ (533-96-0)	226.0	Method B, Annex B, Section B.3.3	100	metals[4]
sodium silicate (corrosion inhibitor)	~~activated silica~~ water glass, silicic acid, sodium salt	$Na_2O(SiO_2)_n$ typically n = 3 (1344-09-8)	242 @ n = ~~1~~3	Method A, Annex B, Section B.3.2	~~16.0~~ 100	metals[4]
sodium trimetaphosphate (corrosion control)	metaphosphoric acid, trisodium salt	$Na_3P_3O_9$ (7785-84-4)	306	Method A, Annex B, Section B.3.2	10.7[5]	metals[4], radionuclides[11], fluoride[11]
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Annex D
(informative)

Chemical product index

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Table D.1
Chemical product index

Chemical name / synonym	Section reference	Table reference	Name used in standard
acrylamide / acrylic acid copolymer	4	4.1	same
activated silica	5 4	~~5.1~~ 4.1	see sodium silicate
alum	4	4.1	see aluminum sulfate

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Rationale: Revised typical use level (TUL) of sodium silicate from 16 mg/L to 100 mg/L and corrected synonyms used for sodium silicate per 2018 DWA-TC JC meeting discussion (November 28, 2018).

BSR/UL 67, Standard for Safety for Panelboards

1. Addition of Alternate Requirements for Doors with Formed Hinges as New Paragraph 9.1.12.1

9.1.12 **Note from the STP Project Manager: This proposal does not specify a revision of this requirement. This paragraph is provided for reference only.** In a dead-front panelboard that has a dead-front shield with a metal thickness in accordance with 9.1.11 and that also has a door as integral parts of the cover, the door may have a thickness less than the requirement of the Standard for Enclosures for Electrical Equipment, Non-Environmental Considerations, UL 50, but not less than 0.032 inch (0.81 mm) if uncoated steel, not less than 0.034 inch (0.86 mm) if galvanized steel, and not less than 0.050 inch (1.29 mm) if aluminum.

9.1.12.1 Formed hinges may be utilized for doors with edges longer than 24 inches (610 mm) or having an area more than 360 in^2 (232,300 mm^2) when:

a) With an edge longer than 24 inches (610 mm) on the side that is hinged and on the side opposite the hinged side, but not on the edges adjacent to the side with the formed hinge;

b) Having an area more than 360 in^2 (232,300 mm^2); and

c) Weighing 6.825 lbs. (3.1 kg) or less for doors made of steel or 3.35 lbs. (1.5 kg) or less for doors made of aluminum.

Note: Weight of the doors corresponds to the maximum weights for doors manufactured in accordance with the requirements and limitations in door sizes that may utilize formed hinges in the Standard for Enclosures for Electrical Equipment, Non-Environmental Considerations, UL 50. For the purposes of this requirement, steel is assumed a weight of 0.283 lbs/in^3, and aluminum is assumed a weight of 0.098 lbs/in^3).

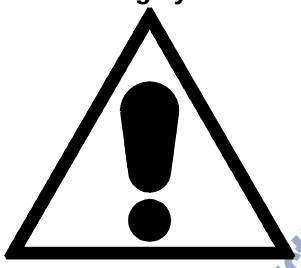
BSR/UL 197, Standard for Commercial Electric Cooking Appliances

1. Use of Graphical Symbols to Transmit a Message

PROPOSAL

85.8 An appliance that employs an indicator light in accordance with 56.5.5 shall be provided with a permanent marking, located adjacent to the light, that identifies the function of the light. The marking shall consist of the word ″WARNING″ or the symbol in Figure 85.1 and the following or equivalent words or symbol Figure 85.2: ″Appliance Is Malfunctioning, Turn Off or Disconnect From Power Supply. See instruction manual before operating.″

Figure 85.1
Warning symbol



UL0004

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Figure 85.2

Above working temperature range

Ref # 0432

Title/Meaning/Referent: Above Working Temperature Range.

Function/description: To Indicate, “above working temperature range

BSR/UL 231, Standard for Safety for Power Outlets

1. Addition of Requirements for Environmental Considerations for Enclosures covered in UL 231

5.1.2 ~~An~~ A power outlet, including any external operating mechanism, such as for a disconnect, mounted on or through the enclosure, shall withstand the environmental tests specified in the Standard for Enclosures for Electrical Equipment, ~~Non-Environmental~~ Environmental Considerations, ~~UL 50~~ UL 50E, for the enclosure type marked in accordance with 35.2. The enclosure type selected from UL 50E shall be a type that is suitable for outdoor use.

5.1.3 A power outlet marked in accordance with 35.2 with a Type 3S or Type 3SX enclosure designation and provided with an external operating mechanism shall be capable of supporting the weight of any ice build-up, being operated as intended, and withstanding removal of the ice by a tool or auxiliary means to gain access to the interior of the enclosure. Determination of these characteristics is to be made in accordance with 21.1 for each maintained position of the external operating mechanism.

5.1.5 In addition to withstanding the environmental tests as specified in 5.1.2, the ~~The~~ enclosure shall be constructed to withstand beating rain and splashing water as determined by application of the requirements specified in the Rain and Splash Test, Section 22, ~~and, when~~ The Rain and Splash Test in Section 22 replaces the Rain Test requirements from the Standard for Enclosures for Electrical Equipment, Environmental Considerations, UL 50E. A power outlet marked for marine use, ~~as specified in~~ shall additionally be subjected to the Spray Test, Section 23. If there is an opening for a ringless type meter without a viewing pane in front of the meter, the enclosure shall be provided with a permanent structural system to channel any accumulation of water to the outside of the enclosure. During the tests specified in the Rain and Splash Test, Section 22, and the Spray Test, Section 23, a meter having the dimensions specified in Figure 5.1 shall be installed in place.

5.1.8 Means for mounting shall be external to the enclosure.

Exception No. 1: A metal enclosure designated as Type 3R or Type 3RX may be provided with internal means for mounting consisting of no more than two openings above the level of any live part or any terminal for a neutral or grounding conductor. More openings may be provided if all such openings:

a) Are closed at the factory; and

b) While in the as-received condition, exclude water when subjected to the test described in the Rain and Splash Test, Section 22.

Exception No. 2: Internal mounting means may be provided in a nonmetallic enclosure if the construction is in accordance with Exception No. 1 and if means to reduce the risk of contact between internal conductors and the mounting means is provided in accordance with 5.1.9.

7.1.3 That portion of a steel post located below grade level and up to 12 inches (305 mm) above grade level shall be painted on both the inside and outside surfaces in addition to being galvanized - Designation G90 or equivalent as covered in the Standard for Enclosures for Electrical Equipment, Environmental Considerations, ~~UL 50~~ UL 50E.

21 External Operating Mechanism Test

21.1 Following the icing test specified in the Standard for Enclosures for Electrical Equipment, ~~Non-Environmental~~ Environmental Considerations, ~~UL 50~~ UL 50E, an enclosure marked with a Type 3S or Type 3SX enclosure designation shall:

a) Be inspected for ice build-up;

b) Have the ice removed; and

c) Be operated as intended in service.

There shall not be damage to the enclosure following this test.

35.2 A power outlet enclosure shall be marked ~~as a Type 3R~~ with the environmental Type indicating the external conditions for which it is intended, as specified in the Standard for Enclosures for Electrical Equipment, ~~Non-Environmental~~ Environmental Considerations, ~~UL 50~~ UL 50E. The marking may be on the inside or outside surface but shall be visible after installation.

~~*Exception: A power outlet that does not contain a meter socket or that completely encloses a meter socket so that an installed meter is not exposed to rain may be marked as an enclosure Type 3, 3S, 4, 4X, or combinations of these types.*~~

35.53 If a Type ~~2,~~ 3, 3R, 3RX, ~~or~~ 3S, or 3SX enclosure has no means for field installation of conduit hubs, the enclosure shall be marked to specify use of listed wet location conduit fittings that comply with the Standard for Conduit, Tubing, and Cable Fittings, UL 514B.

36 Permanence of Marking

36.1 A required marking shall comply with the permanence of marking requirements in the Standard for Enclosures for Electrical Equipment, ~~Non-Environmental~~ Environmental Considerations, ~~UL 50~~ UL 50E.

APPENDIX A

Standards for Components

Standards under which components of the products covered by this standard are evaluated include the following:

Title of Standard - UL Standard Designation

Attachment Plugs and Receptacles - UL 498
Cover Plates for Flush-Mounted Wiring Devices - UL 514D
Enclosures for Electrical Equipment, Environmental Considerations - UL 50E
Enclosures for Electrical Equipment, Non-Environmental Considerations - UL 50
Equipment Wiring Terminals for Use with Aluminum and/or Copper Conductors - UL 486E
Extruded Insulating Tubing - UL 224
Fuseholders - Part 1: General Requirements - UL 4248-1
Fuseholders - Part 12: Class R - UL 4248-12
Fuseholders - Part 15: Class T - UL 4248-15
Ground-Fault Circuit-Interrupters - UL 943
Low-Voltage Fuses - Part 1: General Requirements - UL 248-1
Low-Voltage Fuses - Part 12: Class R Fuses - UL 248-12
Low-Voltage Fuses - Part 15: Class T Fuses - UL 248-15
Marking and Labeling Systems - UL 969
Meter Sockets - UL 414
Molded-Case Circuit Breakers, Molded-Case Switches and Circuit-Breaker Enclosures - UL 489
Organic Coatings for Steel Enclosures for Outdoor Use Electrical Equipment - UL 1332
Panelboards - UL 67
Polymeric Materials - Fabricated Parts - UL 746D
Polymeric Materials - Industrial Laminates, Filament Wound Tubing, Vulcanized Fibre, and Materials Used in Printed-Wiring Boards - UL 746E
Polymeric Materials - Long Term Property Evaluations - UL 746B
Polymeric Materials - Short Term Property Evaluations - UL 746A
Polymeric Materials - Use in Electrical Equipment Evaluations - UL 746C
Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape - UL 510
Thermoplastic-Insulated Wires and Cables - UL 83
Wire Connectors - UL 486A-486B

BSR/UL 514C, Standard for Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers

1. Exception for Configurable Conduit Bodies

PROPOSAL

3.6 CONDUIT BODY - A separate part of a raceway system intended to provide access to the interior of the system through one or more removable covers and/or sockets at a junction of two or more sections or at a terminal point. Boxes, such as FS, FD, and larger boxes, and fittings, such as capped elbows and service entrance elbows, are not considered to be conduit bodies.

66.3.5 The socket depth shall be within the limits specified in Table 66.4 (inches) or Table 66.5 (millimeters) or shall be sufficient to permit assembly to rigid nonmetallic conduit in a manner that will provide strength of both the joint and assembly as determined by compliance with the tests in Bending, Section 83 and Pull Out, Section 84.

Exception No. 1: The tests in Bending, Section 83 and Pull Out, Section 84 are not required for sockets complying with the minimum depth specified in Table 66.4 (inches) or Table 66.5 (millimeters).

Exception No. 2: The tests in Bending, Section 83 and Pull Out, Section 84 are not required for conduit bodies with removeable sockets that may be interchanged with removeable covers when depths of those sockets comply with the minimum depth specified in 66.4 (inches) or Table 66.5 (millimeters).

BSR/UL 1561, Standard for Safety for Standard for Dry-Type General Purpose and Power Transformers

1. Proposal to add cooper bus bar requirements

11.11 The cross section of a bus bar as specified in 11.10 and 11.12 may be reduced by no more than 5 percent due to rounding, shaping, or dimensional tolerances. Bus bar ampacity is determined by compliance with the temperature test requirements of Section 23 ~~or as specified in 11.12~~.

~~11.12 Copper bus bars should be sized based on the transformer full load current determined in accordance with 21.4 and the following:~~

~~a) the current density of copper shall not be less greater than 1000 A/in^2 (1.55 A/mm^2);~~

~~b) the current density of the contact area at a bolted copper joint shall not be less greater than 200 A/in^2; and~~

~~c) each bus bar shall be plated at each joint with tin, silver, or nickel.~~

~~*Exception No. 1: Copper bus bars need not be plated if the current at the joint is 600 A or less.*~~

~~*Exception No. 2: A welded or brazed joint need not be plated.*~~

~~11.13 Other than covered in 11.12, plated or unplated copper bus bars shall meet the temperature requirements in 23.1.~~

Table 23.1

Maximum temperature rises

Material or component	°C
a) Fiber used as electrical insulation	50
b) Any point on a surface adjacent to a transformer, including the surface on which the transformer is mounted	50
c) Insulated wire	40°C less than its recognized temperature rating
d) Any point within a terminal or wiring compartment that a field-installed conductor might contact, including such a conductor itself, unless the transformer is marked in accordance with 38.12.3	
1) Field-wiring conductor current rating of 100 amperes or less	20[a,b]

2) Field-wiring conductor current rating of greater than 100 amperes			35[a,b]
e) Any point on the exterior of the transformer enclosure, except as indicated in 23.2.1 and 23.3.1			50
f) Transformer winding insulation systems (resistance method)			
Insulation System	Ambient	Hot Spot Differential	
Class 105	40	10	55
Class 130	40	15	75
Class 155	40	20	95
Class 180	40	25	115
Class 200	40	25	135
Class 220	40	30	150
Class 240	40	35	165
g) Polymeric insulation materials			40°C less than its recognized temperature rating
h) Bolted joints involving aluminum or copper except where lower limit is specified in (d)			65
~~i) Unplated bus bars or unplated joints~~			~~50~~
~~j) Plated bus bars or plated joints~~			~~65~~

[a] The temperature on a wiring terminal or lug is measured at the point most likely to be contacted by the insulation of a conductor installed as in actual service.

[b] If the rise is 35°C or less and an aluminum bodied connector is used or aluminum wire is intended, the connector shall be marked AL7CU or AL9CU. If the terminal temperature rise exceeds 35°C but does not exceed 50°C, the connector shall be marked AL9CU. See 38.12.3 and 38.12.4 for additional markings.

BSR/UL 2703, Standard for Safety for Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels

1. Additional Installation and Assembly Instructions for Locally (Separately) Sourced Components.

26.4.1 Assembly instructions shall be provided with a product shipped in subassemblies and shall be detailed and adequate to the degree required to facilitate total assembly of the product. If the product will require locally (separately) sourced components, a list of those components and their specifications shall be provided in the instructions. Locally sourced components shall be provided with data to indicate adequacy and compliance with the specific manufacturers specifications.