

CONTENTS

American National Standards

Project Initiation Notification System (PINS)	2
Call for Comment on Standards Proposals	9
Final Actions - (Approved ANS)	53
Call for Members (ANS Consensus Bodies).....	61
Meeting Notices (Standards Developers)	66
American National Standards (ANS) Process	67
ANS Under Continuous Maintenance	68
ANSI-Accredited Standards Developer Contact Information.....	69

International Standards

ISO Draft Standards.....	72
ISO and IEC Newly Published Standards	75
Accreditation Announcements (U.S. TAGs to ISO).....	78
International Organization for Standardization (ISO)	79

Registration of Organization Names in the United States

Proposed Foreign Government Regulations

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.

ABYC (American Boat and Yacht Council)

613 Third Street, Suite 10 | Annapolis, MD 21403 www.abycinc.org

Contact: Sara Moulton; smoulton@abycinc.org

New Standard

BSR/ABYC E-13-202x, Lithium Ion Batteries (new standard)

Stakeholders: Surveyors, consumers, insurance personnel, boat manufacturers, engine manufacturers, accessory manufacturers, government, service specialists, and trade associations.

Project Need: To address the safety for the selection and installation of lithium ion batteries and lithium ion battery system design on boats.

Scope: This standard addresses selection and installation of lithium ion batteries on boats, lithium ion battery system design (e.g., house battery bank, cranking, propulsion), and manufacturer's safety information.

ABYC (American Boat and Yacht Council)

613 Third Street, Suite 10 | Annapolis, MD 21403 www.abycinc.org

Contact: Sara Moulton; smoulton@abycinc.org

Revision

BSR/ABYC H-8-202x, Buoyancy in the Event of Flooding/Swamping (revision of ANSI/ABYC H-8-2017)

Stakeholders: Surveyors, consumers, insurance personnel, boat manufacturers, engine manufacturers, accessory manufacturers, government, service specialists, and trade associations.

Project Need: To address safety in the determination of flotation required to keep boats less than 20 feet (6.1 meters) afloat when flooded or swamped.

Scope: This standard addresses the determination of flotation and placement required to keep boats afloat when flooded/swamped and, where indicated, floating in an approximately level attitude when flooded/swamped.

ABYC (American Boat and Yacht Council)

613 Third Street, Suite 10 | Annapolis, MD 21403 www.abycinc.org

Contact: Sara Moulton; smoulton@abycinc.org

Revision

BSR/ABYC P-21-202x, Manual Hydraulic Steering Systems (revision of ANSI/ABYC P-21-2017)

Stakeholders: Surveyors, consumers, insurance personnel, boat manufacturers, engine manufacturers, accessory manufacturers, government, service specialists, and trade associations.

Project Need: To address safety of manual and hydraulic steering systems in outboard and inboard engines.

Scope: This standard applies to engine-mounted and boat-mounted remote manual and assisted hydraulic steering systems used with single, twin, triple, and quadruple engine installations of outboard engines over 20 hp (14.9 kW) per outboard engine, as well as single- and twin-engine inboard, sterndrive, and water jet drives.

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

180 Technology Parkway | Peachtree Corners, GA 30092 www.ashrae.org

Contact: Tanisha Meyers-Lisle; tmlisle@ashrae.org

Revision

BSR/ASHRAE STANDARD 120-202x, Method of Testing to Determine Flow Resistance of HVAC Ducts and Fittings (revision of ANSI/ASHRAE STANDARD 120-2017)

Stakeholders: Code developers; design engineers; equipment, duct, and sealant manufacturers; facility owners/operators; government; mechanical contractors; regulatory agencies; utilities.

Project Need: Establishes uniform methods of laboratory testing of HVAC ducts and fittings to determine their resistance to airflow. References needs to be updated.

Scope: This standard establishes uniform methods of laboratory testing of HVAC ducts and fittings to determine their resistance to airflow.

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

180 Technology Parkway | Peachtree Corners, GA 30092 www.ashrae.org

Contact: Tanisha Meyers-Lisle; tmlisle@ashrae.org

Revision

BSR/ASHRAE STANDARD 139-202x, Method of Testing for Rating Desiccant Dehumidifiers Utilizing Heat for the Regeneration Process (revision of ANSI/ASHRAE STANDARD 139-2019)

Stakeholders: Equipment manufacturers and testing laboratories.

Project Need: References need to be updated.

Scope: The purpose of this standard is to provide test methods for determining the moisture removal capacity of heat-regenerated desiccant dehumidifiers as well as the coincident thermal energy performance so that comparative evaluations of capacity and performance can be made irrespective of the type or make of the device.

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

180 Technology Parkway | Peachtree Corners, GA 30092 www.ashrae.org

Contact: Tanisha Meyers-Lisle; tmlisle@ashrae.org

Revision

BSR/ASHRAE STANDARD 174-202x, Method of Test for Rating Desiccant-Based Dehumidification Equipment (revision of ANSI/ASHRAE STANDARD 174-2018)

Stakeholders: Equipment manufacturers and testing laboratories.

Project Need: References need to be updated.

Scope: This standard provides test methods for rating the performance of desiccant-based dehumidification equipment.

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180 Technology Parkway | Peachtree Corners, GA 30092 www.ashrae.org

Contact: Tanisha Meyers-Lisle; tmlisle@ashrae.org

Revision

BSR/ASHRAE STANDARD 204-202x, Method of Test for Rating Micro-Combined Heat and Power Devices (revision of ANSI/ASHRAE STANDARD 204-2020)

Stakeholders: Equipment manufacturers of products impacted by this standard, test labs, gas utilities, government agencies such as DOE.

Project Need: The current standard version does not cover some mCHP products that became commercial after the standard had been published.

Scope: This standard provides a test method for determining the net electrical generating performance and heat-recovery performance of micro-combined heat and power devices, sometimes referred to as micro-cogeneration devices. The standard specifies the equipment and instrumentation required, test methods, and calculation procedures.

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180 Technology Parkway | Peachtree Corners, GA 30092 www.ashrae.org

Contact: Tanisha Meyers-Lisle; tmlisle@ashrae.org

Revision

BSR/ASHRAE/ACCA STANDARD 180-202x, Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems (revision of ANSI/ASHRAE/ACCA STANDARD 180-2018)

Stakeholders: Commercial Building owners, managers, maintainers, operators, occupants, and designers.

Project Need: Correction of non-normative text and other additions.

Scope: The purpose of this standard is to establish minimum HVAC inspection and maintenance requirements that preserve a system's ability to achieve acceptable thermal comfort, energy efficiency, and indoor air quality in commercial buildings.

ASNT (American Society for Nondestructive Testing)

1711 Arlingate Lane | Columbus, OH 43228 www.asnt.org

Contact: Brian Frye; bfrye@asnt.org

National Adoption

BSR/ASNT CP-106-202x, Nondestructive Testing - Qualification and Certification of Personnel (identical national adoption of ISO 9712:2012 and revision of ANSI/ASNT CP-106 (ISO 9712-2012)-2018)

Stakeholders: NDT Industry providers, users, equipment purchasers, equipment manufacturers, and general interest.

Project Need: Adoption of the standard will be beneficial to the industry.

Scope: This standard specifies requirements for principles for the qualification and certification of personnel who perform industrial nondestructive testing (NDT).

ASTM (ASTM International)

100 Barr Harbor Drive | West Conshohocken, PA 19428-2959 www.astm.org

Contact: Corice Leonard; accreditation@astm.org

Revision

BSR/ASTM D4495-202x, Test Method for Impact Resistance of Poly(Vinyl Chloride) (PVC) Rigid Profiles by Means of a Falling Weight (revision of ANSI/ASTM D4495-2016)

Stakeholders: Plastics industry.

Project Need: This test method is used either by itself or in conjunction with other methods for measuring PVC product toughness.

Scope: This test method covers the determination of the energy required to crack or break rigid poly(vinyl chloride) (PVC) profile under specified conditions of impact by means of a falling weight.

ASTM (ASTM International)

100 Barr Harbor Drive | West Conshohocken, PA 19428-2959 www.astm.org

Contact: Corice Leonard; accreditation@astm.org

New Standard

BSR/ASTM E2764-202x, Standard Practice for Uncertainty Assessment in the Context of Seized-Drug Analysis (new standard)

Stakeholders: Forensic Sciences industry.

Project Need: The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

Scope: This practice provides guidance on the concept of uncertainty and its application to the qualitative and quantitative analysis of seized drugs. In this context, uncertainty encompasses limitations of qualitative methods as well as numerical ranges as applied to quantitative analyses.

AWS (American Welding Society)

8669 NW 36th Street, Suite 130 | Miami, FL 33166-6672 www.aws.org

Contact: Kevin Bulger; kbulger@aws.org

Revision

BSR/AWS C3.5M/C3.5-202x, Specification for Induction Brazing (revision of ANSI/AWS C3.5M/C3.5-2016-AMD1)

Stakeholders: Engineers, induction brazers, and quality controllers.

Project Need: To provide the minimum fabrication, equipment, and process procedure requirements, as well as inspection requirements for induction brazing.

Scope: This specification provides the minimum fabrication, equipment, and process procedure requirements, as well as inspection requirements for the induction brazing of steels, copper, copper alloys, and heat- and corrosion-resistant alloys and other materials that can be adequately induction brazed (the induction brazing of aluminum alloys is addressed in AWS C3.7M/C3.7, Specification for Aluminum Brazing). This specification provides criteria for classifying induction-brazed joints based on loading and the consequences of failure and quality-assurance criteria defining the limits of acceptability in each class. The specification defines acceptable induction brazing equipment, materials, and procedures, as well as the required inspection for each class of joint.

ECIA (Electronic Components Industry Association)

13873 Park Center Road, Suite 315 | Herndon, VA 20171 www.ecianow.org

Contact: Laura Donohoe; ldonohoe@ecianow.org

Reaffirmation

BSR/EIA 198-3-10-2015 (R202x), Multilayer (Monolithic), Unencapsulated, Ceramic Dielectric, Surface-Mount Low-Induction Chip Capacitors and Multi-Terminal Low-Induction Capacitors (reaffirmation of ANSI/EIA 198-3-10-2015)

Stakeholders: Electrical, Electronics, and Telecommunications industries.

Project Need: Reaffirm current American National Standard.

Scope: This standard deals with fixed-value capacitors, designed for surface-mount circuit applications. They are lower inductance, unencapsulated, ceramic dielectric, multilayer chip capacitors with solderable end terminations, primarily for high-frequency applications.

HL7 (Health Level Seven)

3300 Washtenaw Avenue, Suite 227 | Ann Arbor, MI 48104 www.hl7.org

Contact: Karen Van Hentenryck; Karenvan@HL7.org

New Standard

BSR/HL7 EHR POHR FP, R1-202x, HL7 EHR-System Problem-Oriented Health Record (POHR) Functional Profile, Release 1 (new standard)

Stakeholders: Clinical providers (physicians, nurses, PAs, etc.), Individual clinical providers (inpatient, outpatient, ED), EHR & PHR Vendors, Health Care IT Vendors.

Project Need: The committee unanimously believes that patient records should guide and reflect clinical problem solving and that the mere translation of current record formats, data, and habits from paper to computer-based systems will not alone produce the range of improvements in care potentially achievable in a truly reformed patient record system. Current systems include behaviors and record forms that produce substantial waste, imprecision, and complexity in a care system less and less able to tolerate that burden.

Scope: A POHR Functional Profile would provide health IT standards, i.e., guidance to vendors for EHR design, including changes to existing EHRs. How those standards are implemented is determined not by HL7 or EHR vendors but by local users (individual and institutional). This means that POHR Functional Profile standards are prescriptive as applied to EHR vendors that seek to offer conforming products. How those vendors' products are used by their provider customers would determine whether the POHR Functional Profile is prescriptive as applied to EHR users.

IAPMO (Z) (International Association of Plumbing & Mechanical Officials)18927 Hickory Creek Drive, Suite 220 | Mokena, IL 60448 <https://www.iapmostandards.org>Contact: Terry Burger; terry.burger@asse-plumbing.org; standards@iapmostandards.org***New Standard***

BSR/IAPMO ASSE 1119-202x, Product Performance Requirements for Legionella Reduction and Treatment Devices (new standard)

Stakeholders: Plumbing system designers, engineers, specifiers, water-heater industry manufacturers, and Authorities Having Jurisdiction.

Project Need: About 6,000 cases of Legionnaires' disease were reported in the United States in 2015 per the Center for Disease Control. The Legionella bacterium is present in many water supplies resulting in the risk of water-supply users becoming infected with the respiratory condition, Legionellosis (i.e., Legionnaires' Disease, Pontiac Fever,) when the bacteria in water vapor is breathed in, typically while a user is bathing. There are point-of-use devices on the market which can reduce the occurrence of users contracting this disease. At present, there are no standards for these devices. Claims made for the reduction of Legionella go unverified. There is a need to have established minimum criteria and a means to verify claims to ensure these devices are indeed providing a degree of protection.

Scope: Legionella reduction and treatment devices are designed to reduce the microorganisms in the genus Legionella (e.g., Legionella pneumophila) typically found in potable water systems. The devices covered by this standard reduce the number of the bacteria through inactivation and/or filtration. They can reduce or prevent the downstream bacterial colonization of a water system and thus ultimately the release of the bacteria into the product water. Devices are intended to be used at point-of-use (POU) in hot- or cold-water applications for drinking water, washing hands, or showering. This standard covers devices that treat hot-water supplies to remove the Legionella species of bacterium, which proliferates when the water temperature is between 77-108 deg. F (25-42.2 deg. C). Most potable water treatment standards apply to devices that service cold-water supplies rather than elevated temperatures. This standard will specifically target the reduction of bacteria that cause Legionellosis.

LIA (ASC Z136) (Laser Institute of America)12001 Research Parkway, Suite 210 | Orlando, FL 32828 www.laserinstitute.orgContact: Liliana Caldero; lcaldero@lia.org***Revision***

BSR Z136.4-202x, Recommended Practice for Laser Safety Measurements for Classification and Hazard Evaluation (revision of ANSI Z136.4-2021)

Stakeholders: Any person or organization required to perform radiometric measurements in order to classify lasers or perform laser hazard evaluations in accordance with ANSI Z136.1. This potential user base could include industry (e.g., laser device manufacturers including manufacturers of protective eyewear, test laboratories, health physicists, safety engineers), academia, government including DoD (military), or any other entity using/selling/demonstrating a laser system.

Project Need: Intended to assist users who are required to classify or perform laser hazard evaluations to ensure that appropriate control measures are implemented; upcoming changes in ANSI Z136.1 will result in needed updates to this document to continue to be aligned with requirements of Z136.1. This updated Z136.4 will address existing and emerging laser technology measurement requirements, e.g., broad-spectrum laser sources, ultrafast laser systems, and new high-power systems not previously considered.

Scope: This document provides practical guidance for measurement procedures used for classification and hazard evaluation of lasers. This document is intended to provide guidance for manufacturers, laser safety officers (LSOs), and trained laser users

NEMA (ASC C18) (National Electrical Manufacturers Association)

1300 North 17th Street, Suite 900 | Arlington, VA 22209 www.nema.org

Contact: Khaled Masri; Khaled.Masri@nema.org

Revision

BSR C18.2M Part 2-202x, Portable Nickel Rechargeable Cells and Batteries - Safety Standard (revision of ANSI C18.2M, Part 2-2021)

Stakeholders: Consumer Electronics industry, Toys industry, manufacturers, testing labs.

Project Need: Introduce new requirements and update standards.

Scope: This standard specifies performance requirements for standardized portable nickel-cadmium and nickel-metal-hydride rechargeable cells and batteries to ensure their safe operation under normal use and reasonably foreseeable misuse. It also includes information relevant to hazard avoidance.

NENA (National Emergency Number Association)

1700 Diagonal Road, Suite 500 | Alexandria, VA 22314 www.nena.org

Contact: Delaine Arnold; darnold@nena.org

Revision

BSR/NENA STA.021.2-202x, NENA Standard for Emergency Incident Data Object (EIDO) (revision and redesignation of ANSI/NENA STA.021.1-2021)

Stakeholders: 9-1-1 producers, 9-1-1 users, general interest.

Project Need: Enhancement to the EIDO JSON structure to provide more detailed information about an incident.

Scope: As agencies and regions move forward with implementing NG9-1-1- and IP-based emergency communications systems, it is critical that they adhere to a standardized, industry neutral format for exchanging emergency incident information between disparate manufacturer's systems located within one or more public safety agencies, and with other incident stakeholders. Produce an updated standard and accompanying JSON schema which further support the exchange of incident data.

Call for Comment on Standards Proposals

American National Standards

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. e-mail: psa@ansi.org

* Standard for consumer products

Comment Deadline: December 5, 2021

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

180 Technology Parkway, Peachtree Corners, GA 30092 | etoto@ashrae.org, www.ashrae.org

Addenda

BSR/ASHRAE/IES Addendum au to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

The purpose of this addendum is to correct an issue with the Simplified Building Compliance Path in Section 6.3. Currently, this section does not explicitly require verification of HVAC equipment efficiencies (Section 6.4.1.5). This modification would specify that Section 6.4.1.5 requirements apply to heating and cooling equipment used under the simplified path.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: <https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts>

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

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Addenda

BSR/ASHRAE/IES Addendum aw to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

Adds minimum efficiency requirements for large-diameter ceiling fans (LDCF). The Energy Act of 2020 defines LDCFs as ceiling fans with a blade span greater than 84 inches, established the Ceiling Fan Energy Index (CFEI) as the performance metric, and set an energy conservation standard. The Department of Energy published a rule that starting January 21, 2020, LDCFs meet these requirements. This addendum adds the test procedure for LDCFs, the CFEI metric, and the federal minimum efficiency in a new table.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: <https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts>

Comment Deadline: December 5, 2021

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

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Addenda

BSR/ASHRAE/IES Addendum az to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

Addendum az introduces requirements for the design, installation, and control of compressed air systems. Compressed air systems are an underserved end-use category. Despite accounting for more than 10% of electricity usage in the industrial sector, guidance on energy management and design practice is limited in existing standards and codes. California Title 24, Part 6 now includes compressed-air system efficiency measures after a successful adoption effort that involved exhaustive research, modeling, and stakeholder engagement. This proposal applies the lessons learned via the Title 24 process to create a similar set of requirements for 90.1. It includes five measures, each of which addresses common sources of energy waste: requirements for trim compressors and storage, advanced controls, leak testing, monitoring, and pipe sizing.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: <https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts>

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

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Addenda

BSR/ASHRAE/IES Addendum bb to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

This addendum updates the lighting power density (LPD) values in the Building Area Method Compliance Path. Standard 90.1-2019 established consistency among the lighting power compliance approaches and made the Space-by-Space LPD values the primary values. In the Building Area Method, the LPD value for each building type is developed via a weighted-average approach using the Space-by-Space LPD values.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: <https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts>

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Addenda

BSR/ASHRAE/IES Addendum be to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

The addendum updates the reference year for Standard 140, Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs, in Sections 11 and 12 as well as Appendix C and G, to reflect important changes in the standard since 2017.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: <https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts>

Comment Deadline: December 5, 2021

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Addenda

BSR/ASHRAE/IES Addendum bf to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

This addendum updates the values for the decorative and retail additional lighting power allowances, adds a new additional allowance for videoconferencing, and moves the allowances and required controls to a table for easy reference.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: <https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts>

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

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Addenda

BSR/ASHRAE/IES Addendum bh to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

This addendum proposes a change to the on-site photovoltaic system parameter for Temperature Coefficient of Power described in Section 11, Table 11.5.1, Part 15, required to determine the amount of on-site renewable energy to be included in the Energy Cost Budget when a Proposed Design does not include an on-site renewable energy system. The updated value, $-0.35\%/^{\circ}\text{C}$ corresponds to a 19% efficient solar panel, which is the standard value since 90.1-2019.

[Click here to view these changes in full](#)

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Addenda

BSR/ASHRAE/IES Addendum bi to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

This proposed addendum addresses roof replacements with a new definition and subsection for handling existing roofs with above-deck insulation. Currently, there are no specific requirements or definitions for roof replacements; this has constrained such projects to the general alteration requirements of Section 5.1.3, which are difficult for certain existing roofs to meet. These modifications to Section 5 will minimize marketplace confusion and prevent conflicting use of the standard.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: <https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts>

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

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Addenda

BSR/ASHRAE/IES Addendum bj to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

This addendum intends to clarify the scoping and applicability of Appendix A of this Standard. The proposed language is focused on two goals: first, improving the format and hierarchy of provisions to be more understandable and enforceable; and second, updating the alternative options available to 90.1 users for compliance. In addition, the update contains revisions to facilitate the review of calculations, tests, and modeling, including where there was confusion and ambiguity with the application of the +/- R-2 tolerance as used in Section A1.2 of the current standard.

[Click here to view these changes in full](#)

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Addenda

BSR/ASHRAE/IES Addendum bk to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

Proposed Addendum bk seeks to align humidity requirements in 90.1 with recent changes to 62.1-2019 that involve limiting the dew point to 60°F. Other changes to humidity language are also proposed, with a focus on minimizing the occurrence of simultaneous heating and cooling and encouraging site-recovered energy use.

[Click here to view these changes in full](#)

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Addenda

BSR/ASHRAE/IES Addendum bm to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

Provides explicit instructions for multiple-zone systems to reset the minimum outdoor-air setpoint based on a zone outdoor-air requirement of zero during the occupied-standby mode. It applies only to systems that already include the components and controls that allow reset of outdoor airflow.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: <https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts>

Comment Deadline: December 5, 2021

ASME (American Society of Mechanical Engineers)

Two Park Avenue, 6th Floor, New York, NY 10016-5990 | ansibox@asme.org, www.asme.org

Revision

BSR/ASME B16.21-202x, Nonmetallic Flat Gaskets for Pipe Flanges (revision of ANSI/ASME B16.21-2016)

This Standard covers types, sizes, materials, dimensions, tolerances, and markings for nonmetallic flat gaskets.

These gaskets are dimensionally suitable for use with flanges described in the referenced flange standards.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: Andres Carrion; CarrionA@asme.org

AWWA (American Water Works Association)

6666 W. Quincy Avenue, Denver, CO 80235 | polson@awwa.org, www.awwa.org

New Standard

BSR/AWWA C623-202x, Cured-in-Place Pipe (CIPP) Rehabilitation of Pressurized Potable Water Pipelines, 4 in. (100 mm) and Larger (new standard)

This standard covers materials and procedures for the rehabilitation of existing water mains 4 in (100 mm) in diameter and larger by the installation and curing of a resin-impregnated textile tube that is either inverted into the main using a hydrostatic head of potable water or air pressure, or pulled into the main and subsequently inflated by potable water or air.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: AWWA, Paul Olson; polson@awwa.org

B11 (B11 Standards, Inc.)

P.O. Box 690905, Houston, TX 77269 | cfelinski@b11standards.org, <https://www.b11standards.org/>

Revision

BSR/B11.3-202x, Safety Requirements for Power Press Brakes (revision of ANSI B11.3-2012 (R2020))

The requirements of this standard apply to those machines classified as power press brakes (referred to in this standard simply as “press brakes”), which are designed and constructed for the specific purpose of bending material.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: David Felinski; dfelinski@b11standards.org

B11 (B11 Standards, Inc.)

P.O. Box 690905, Houston, TX 77269 | cfelinski@b11standards.org, <https://www.b11standards.org/>

Revision

BSR/B11.6-202x, Safety Requirements for Manual Turning Machines with or without Automatic Control (revision of ANSI B11.6-2001 (R2020))

This standard specifies safety requirements for the design, construction, operation, and maintenance (including installation, dismantling, and transport) of the general class of manually controlled horizontal and vertical spindle-turning machines. Machines covered by this standard are intended to work metals and other man-made materials. This standard also applies to devices that are integral to the machine.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: David Felinski; dfelinski@b11standards.org

Comment Deadline: December 5, 2021

B11 (B11 Standards, Inc.)

P.O. Box 690905, Houston, TX 77269 | cfelinski@b11standards.org, <https://www.b11standards.org/>

Revision

BSR/B11.15-202x, Safety Requirements for Bar, Pipe, Tube, and Shape Bending Machines (revision of ANSI B11.15-2001 (R2020))

The requirements of this standard apply to any power-driven machine designed for bending bar, pipe, tube, and shapes by means of bending dies, clamp dies, pressure dies, mandrels, wiper dies, vertical bending punches, radius dies, wing dies, and associated tooling.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: David Felinski; dfelinski@b11standards.org

UL (Underwriters Laboratories)

12 Laboratory Drive, Research Triangle Park, NC 27709-3995 | Annabelle.Hollen@ul.org, <https://ul.org/>

Revision

BSR/UL 401-202x, Standard for Portable Spray Hose Nozzles for Fire-Protection Service (revision of ANSI/UL 401-2017)

The requirements of this standard cover portable hand-line spray-hose nozzles intended for general fire fighting or for use with the fire hose mounted on standpipe systems. Requirements for the installation and use of spray nozzles used in standpipe systems are intended to be in accordance with the Standard for Standpipe, and Hose Systems, NFPA 14. Nozzles covered by this Standard are intended to be inspected and maintained in accordance with Standard for the Inspection, Care and Use of Fire Hose, Couplings and Nozzles and the Service Testing of Fire Hose, NFPA 1962, and the Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems, NFPA 25, when used in standpipe systems. Nozzles covered by this Standard are intended for use on: Class A common combustibles such as wood and paper, and B flammable liquid fires; or Class A, B, and C, if suitable for use on electrically energized fires.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: Follow the instructions in the following website to enter comments into the CSDS Work Area: <https://csds.ul.com/Home/ProposalsDefault.aspx>

UL (Underwriters Laboratories)

171 Nepean Street, Suite 400, Ottawa, ON K2P 0B4 Canada | sabrina.khrebto@ul.org, <https://ul.org/>

Revision

BSR/UL 514C-202X, Standard for Safety for Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers (revision of ANSI/UL 514C-2020)

Topic 1. Assembled boxes (box with removable walls).

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: Follow the instructions in the following website to enter comments into the CSDS Work Area: <https://csds.ul.com/Home/ProposalsDefault.aspx>

Comment Deadline: December 5, 2021

UL (Underwriters Laboratories)

47173 Benicia Street, Fremont, CA 94538 | Linda.L.Phinney@ul.org, <https://ul.org/>

Revision

BSR/UL 758-202x, Standard for Appliance Wiring Material (November 5, 2021) (revision of ANSI/UL 758-2021)
This proposal covers: (1) Addition of Halogen-Free (HF) or Low-Smoke Halogen-Free (LSHF) wire to 51.2; (2) Insulation resistance test time, revised 50.1.

[Click here to view these changes in full](#)

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UL (Underwriters Laboratories)

171 Nepean Street, Suite 400, Ottawa, ON K2P 0B4 Canada | sabrina.khreibtov@ul.org, <https://ul.org/>

Revision

BSR/UL 1425-202X, Standard for Safety for Cables for Non-Power-Limited Fire-Alarm Circuits (revision of ANSI/UL 1425-2010 (R2020))

Topic 1. Introduction of optional suffixes HF, LSHF, and ST1 and deletion of limited combustible

[Click here to view these changes in full](#)

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UL (Underwriters Laboratories)

171 Nepean Street, Suite 400, Ottawa, ON K2P 0B4 Canada | sabrina.khreibtov@ul.org, <https://ul.org/>

Revision

BSR/UL 2250-202X, Standard for Safety for Instrumentation Tray Cable (revision of ANSI/UL 2250-2020)

Topic 1. Introduction of optional suffixes HF, LSHF, and ST1 and deletion of LS.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: Follow the instructions in the following website to enter comments into the CSDS Work Area: <https://csds.ul.com/Home/ProposalsDefault.aspx>

UL (Underwriters Laboratories)

12 Laboratory Drive, Research Triangle Park, NC 27709-3995 | Joshua.Johnson@ul.org, <https://ul.org/>

Revision

BSR/UL 1660-202X, Standard for Safety for Liquid-Tight Flexible Nonmetallic Conduit (revision of ANSI/UL 1660-2019)

(1) Marking requirements for suitability for use in swimming-pool corrosive environments; (2) Method for determining the dimensions of the Outside Diameter (O.D.) for types LFNC-A (4.3.1) or LFNC-B.

[Click here to view these changes in full](#)

Send comments (copy psa@ansi.org) to: Follow the instructions in the following website to enter comments into the CSDS Work Area: <https://csds.ul.com/Home/ProposalsDefault.aspx>

Comment Deadline: December 20, 2021

AAFS (American Academy of Forensic Sciences)

410 North 21st Street, Colorado Springs, CO 80904 | tambrosius@aafs.org, www.aafs.org

New Standard

BSR/ASB BRP 156-202x, Best Practices for Specimen Collection and Preservation for Forensic Toxicology (new standard)

This document delineates guidelines for the collection of forensic toxicology specimens, their amounts, preservatives, and storage conditions. This guideline applies to specimens collected for laboratories performing forensic toxicological analysis in the following sub-disciplines: postmortem toxicology, human performance toxicology (e.g., drug-facilitated crimes and driving-under-the-influence of alcohol or drugs) and other forensic testing (e.g., court-ordered toxicology, general forensic toxicology). It is not intended for the area of breath-alcohol toxicology.

Single copy price: Free

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Send comments (copy psa@ansi.org) to: asb@aafs.org

AAFS (American Academy of Forensic Sciences)

410 North 21st Street, Colorado Springs, CO 80904 | tambrosius@aafs.org, www.aafs.org

New Standard

BSR/ASB Std 153-202x, Standard Practices for Proficiency Testing for Forensic Toxicology Laboratories and Breath Alcohol Programs (new standard)

This document defines the minimum scope, requirements, and frequency for proficiency testing for laboratories engaged in the following subdisciplines: postmortem forensic toxicology, human performance toxicology (e.g., drug-facilitated crimes, driving-under-the-influence of alcohol or drugs, breath alcohol program), and general forensic toxicology (non-lethal poisonings or intoxications). This document is not intended to cover employment drug testing or court-ordered toxicology (e.g., probation and parole, drug courts, child services).

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AAFS (American Academy of Forensic Sciences)

410 North 21st Street, Colorado Springs, CO 80904 | tambrosius@aafs.org, www.aafs.org

New Standard

BSR/ASB Std 159-202x, Standard for Scene Investigation (new standard)

This document provides general requirements for scene investigation. This document establishes a framework for expected actions and decision-making based on foundational principles related to legal considerations, personnel safety, scientific reliability and validity, preserving context, maintaining evidence integrity, transparency, and managing bias.

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Send comments (copy psa@ansi.org) to: asb@aafs.org

APCO (Association of Public-Safety Communications Officials-International)

351 N. Williamson Boulevard, Daytona Beach, FL 32114-1112 | apcostandards@apcointl.org, www.apcointl.org

Revision

BSR/APCO 3.109.3-202x, Core Competencies and Minimum Training Standards for Public Safety Communications Manager/Director (revision and redesignation of ANSI/APCO 3.109.2-2014)

This standard revision identifies the core competencies and minimum training requirements for the Public Safety Communications Manager/Director, referred to as Manager/Director in this standard. This position is typically tasked with managing and directing all aspects of a public-safety communications center, while effectively utilizing leadership skills, resources, and partnerships in order to successfully provide emergency communications service.

Single copy price: Free

Obtain an electronic copy from: <https://www.apcointl.org/services/standards/standards-review-comment/>

Send comments (copy psa@ansi.org) to: Mindy Adams; apcostandards@apcointl.org

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

180 Technology Parkway, Peachtree Corners, GA 30092 | rshanley@ashrae.org, www.ashrae.org

Addenda

BSR/ASHRAE Addendum I to BSR/ASHRAE Standard 15-202x, Safety Standard for Refrigeration Systems (addenda to ANSI/ASHRAE Standard 15-2019)

This proposed addendum I to ASHRAE Standard 15-2019 modifies portions of the document to incorporate requirements for commercial refrigeration applications with the use of A2L, A2, and A3 refrigerants. The text developed is in response to CMP0004-001 based on information and requirements in conjunction with proposed product safety standard UL/CSA 60335-2-89, as well as research performed in collaboration of AHRI, ASHRAE, the U.S. Department of Energy, and California Energy Commission.

Single copy price: \$35.00

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

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

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Addenda

BSR/ASHRAE Addendum m to BSR/ASHRAE Standard 15-202x, Safety Standard for Refrigeration Systems (addenda to ANSI/ASHRAE Standard 15-2019)

This proposed addendum to ANSI/ASHRAE Standard 15-2019 modifies allowances for the use of mechanical ventilation to expand this mitigation strategy for human-comfort applications using A2L refrigerants. Presently, Section 7.6.4 restricts the use of mechanical ventilation solely to systems that have compressors and pressure vessels located indoors. This allowance, and requirements if the allowance is used, in ANSI/ASHRAE Standard 15-2019 matches the allowance/requirements in the current third edition of UL 60335 2 40/CSA C22.2 No. 60335-2-40 product safety standard (Refer to Annex GG.4). Notably, this same domestic product safety standard allows the use of mechanical ventilation in other human comfort applications – those with compressors and pressure vessels located outdoors (refer to Annex GG.8). Further, the International version of the product safety standard (IEC 60335-2-40, 6th edition) has the same requirements/allowances as the North American version.

Single copy price: \$35.00

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Addenda

BSR/ASHRAE/IES Addendum as to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

This addendum has two parts: (1) It cleans up language and spelling errors in the “Testing and Verification” and “Commissioning” requirements throughout the standard, and (2) It moves “Inspections” – currently in Section 5.9.3 – to Section 4, “Administration and Enforcement.” In addition, a couple of the inspection items specifically related to verification and commissioning (and not general administration and enforcement) are moved from Section 5.9.3 to Section 5.9.1.

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Addenda

BSR/ASHRAE/IES Addendum at to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

Modifies the definition of “alteration” so that it is not confused as being inclusive of “additions,” which are defined separately. This addendum also proposes a new numbering structure for major section headings that would create a consistent framework throughout the standard.

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Addenda

BSR/ASHRAE/IES Addendum ay to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

This addendum applies the DOE's Appliance Standards and Rulemaking Federal Advisory Committee (ASRAC) VRF Working Group's revisions to the test procedure and Energy Conservation Standards for Variable Refrigerant Flow equipment. The new test procedure, AHRI 1230-2021, is significantly more stringent and will result in lower EERs and IEERs for the same equipment. As a result, changes to Tables 6.8.1-8 and 6.8.1-9 are required, including an update to the referenced test procedure (AHRI 1230-2021).

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Addenda

BSR/ASHRAE/IES Addendum ba to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

This addendum updates space-by-space lighting power density (LPD) values based on improvements in efficacy. On average, LPD values have been reduced by 4% to reflect changes in available technology. Interior controls in Section 9.4.1.1 and Table 9.5.2.1 have also been updated, with various improvements to formatting and the addition of several new requirements for office spaces.

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Addenda

BSR/ASHRAE/IES Addendum bd to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

Adds a new normative appendix (Appendix J) to list chiller performance curve (A-X) inputs based on system type from Table 6.8.1-3. This provides a resource for Chapter 11 or Appendix G users to model minimally compliant chiller performance for budget and baseline building designs, and for a proposed building design when specific equipment performance is unknown. To accommodate different simulation programs, values are provided for both modeling inputs in IP and SI units.

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

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Addenda

BSR/ASHRAE/IES Addendum bo to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

This addendum is an update to the fan power limits in Section 6.5.3.1. The effect of this update would be, on average, a 10% increase in stringency across most fan system types. An important driving factor behind this proposal is to solve problems that have been identified within the current requirements and fan power calculations; for example, in the new requirements: (1) actual electrical input power and efficiency of fan transmission, motor, or variable-speed controller are considered; (2) small, medium, and large air-handling systems are covered; (3) the growing use of hot gas reheat coils, water economizer coils, and series energy recovery is acknowledged with new fan power allowances; (4) the scope is expanded to include fan systems that do not include a source of heating or cooling (e.g., large energy-recovery ventilators), all fans serving interior spaces, and fans used in alterations. Finally, the power threshold has been reduced to 1 kW input power from 5 motor nameplate horsepower so that fewer fan systems are excluded.

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Addenda

BSR/ASHRAE/IES Addendum t to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2019)

This ISC modifies the whole building test requirements compared to the first public review draft. In this version, the testing threshold is 10,000 sf (compared to 25,000 sf) and the minimum air tightness performance is 0.35 cfm/sf (versus 0.3 cfm/sf).

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

180 Technology Parkway, Peachtree Corners, GA 30092 | tmlisle@ashrae.org, www.ashrae.org

Withdrawal

ANSI/ASHRAE Standard 137-2013 (R2017), Methods of Testing for Efficiency of Space-Conditioning/Water-Heating Appliances that Includes a Desuperheater Water Heater (withdrawal of ANSI/ASHRAE Standard 137-2013 (R2017))

Reason for withdrawal: There is no evidence that the standard is in use. With no active users or known equipment covered by the scope of the standard, updating and maintaining the standard is not practical or advised. Scope: This standard covers electric, air-to-air, space-conditioning appliances that include a refrigerant-to-water desuperheater and have rated cooling capacities of less than 65,000 Btu/h.

Single copy price: \$35.00

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

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ASME (American Society of Mechanical Engineers)

Two Park Avenue, M/S 6-2B, New York, NY 10016-5990 | ansibox@asme.org, www.asme.org

Revision

BSR/ASME B30.16-202x, Overhead Underhung and Stationary Hoists (revision of ANSI/ASME B30.16-2017) Volume B30.16 includes provisions that apply to the construction, installation, operation, inspection, testing, and maintenance of overhead underhung and stationary hoists, including hand-chain-operated, electric-powered, and air-powered chain and wire rope hoists used for, but not limited to, vertical lifting and lowering of freely suspended, unguided loads that consist of equipment and materials.

Single copy price: Free

Obtain an electronic copy from: <https://cstools.asme.org/csconnect/PublicReviewPage.cfm>

Send comments (copy psa@ansi.org) to: Kathleen Peterson; petersonk@asme.org

ASTM (ASTM International)

100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 | accreditation@astm.org, www.astm.org

New Standard

BSR/ASTM WK69284-202x, Specification for Unleaded Aviation Gasoline Test Fuel Containing Organo-metallic Additive (new standard)

https://www.astm.org/ANSI_SA

Single copy price: Free

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ASTM (ASTM International)

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New Standard

BSR/ASTM WK69536-202x, Test Method for Static Loading of Treestands, Climbing Sticks, and Tripod or Tower Stands (new standard)

https://www.astm.org/ANSI_SA

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New Standard

BSR/ASTM WK75936-202x, Terminology for Hunting Saddles (new standard)

https://www.astm.org/ANSI_SA

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New Standard

BSR/ASTM WK75939-202x, Test Method for Hunting Saddle Static Load Capacity (new standard)

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ASTM (ASTM International)

100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 | accreditation@astm.org, www.astm.org

Reaffirmation

BSR/ASTM F1081-2009 (R202x), Specification for Competition Wrestling Mats (reaffirmation of ANSI/ASTM F1081-2009 (R2015))

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ASTM (ASTM International)

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Reaffirmation

BSR/ASTM F1786-1997 (R202x), Test Method for Performance of Braising Pans (reaffirmation of ANSI/ASTM F1786-1997 (R2016))

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Reaffirmation

BSR/ASTM F1991-2006 (R202x), Test Method for Performance of Chinese (Wok) Ranges (reaffirmation of ANSI/ASTM F1991-2006 (R2016))

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Reaffirmation

BSR/ASTM F2125-2009 (R202x), Test Method for Treestand Static Stability and Adherence (reaffirmation of ANSI/ASTM F2125-2009 (R2013))

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Reaffirmation

BSR/ASTM F2128-2013 (R202x), Test Method for Treestand Repetitive Loading Capability (reaffirmation of ANSI/ASTM F2128-2013)

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Reaffirmation

BSR/ASTM F2239-2010 (R202x), Test Method for Performance of Conveyor Broilers (reaffirmation of ANSI/ASTM F2239-2010 (R2016))

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Reaffirmation

BSR/ASTM F2379-2004 (R202x), Test Method for Energy Performance of Powered Open Warewashing Sinks (reaffirmation of ANSI/ASTM F2379-2004 (R2016))

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Reaffirmation

BSR/ASTM F2472-2005 (R202x), Test Method for Performance of Staff-Serve Hot Deli Cases (reaffirmation of ANSI/ASTM F2472-2005 (R2016))

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Reaffirmation

BSR/ASTM F2531-2013 (R202x), Test Method for Load Capacity of Treestand Seats (reaffirmation of ANSI/ASTM F2531-2013)

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Reaffirmation

BSR/ASTM F3188-2016 (R202x), Specification for Extractable Hazardous Metals in Synthetic Turf Infill Materials (reaffirmation of ANSI/ASTM F3188-2016)

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Reaffirmation

BSR/ASTM F3216-2016 (R202x), Test Method for Performance of Retherm Ovens (reaffirmation of ANSI/ASTM F3216-2016)

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Revision

BSR/ASTM D1655-202x, Specification for Aviation Turbine Fuels (revision of ANSI/ASTM D1655-2021a)

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BSR/ASTM D2276-202x, Test Method for Particulate Contaminant in Aviation Fuel by Line Sampling (revision of ANSI/ASTM D2276-2006 (R2014))

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BSR/ASTM D3240-202x, Test Method for Undissolved Water In Aviation Turbine Fuels (revision of ANSI/ASTM D3240-2015)

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Revision

BSR/ASTM D6792-202x, Practice for Quality Management Systems in Petroleum Products, Liquid Fuels, and Lubricants Testing Laboratories (revision of ANSI/ASTM D6792-2021A)

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Revision

BSR/ASTM D7223-202x, Specification for Aviation Certification Turbine Fuel (revision of ANSI/ASTM D7223-2017)

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BSR/ASTM D7254-202x, Specification for Polypropylene (PP) Siding (revision of ANSI/ASTM D7254-2020)

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BSR/ASTM D7793-202x, Specification for Insulated Vinyl Siding (revision of ANSI/ASTM D7793-2021)

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Revision

BSR/ASTM D7826-202x, Guide for Evaluation of New Aviation Gasolines and New Aviation Gasoline Additives (revision of ANSI/ASTM D7826-2021)

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Revision

BSR/ASTM D8073-202x, Test Method for Determination of Water Separation Characteristics of Aviation Turbine Fuel by Small Scale Water Separation Instrument (revision of ANSI/ASTM D8073-2016 (R2021))

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Revision

BSR/ASTM D8147-202x, Specification for Special-Purpose Test Fuels for Aviation Compression-Ignition Engines (revision of ANSI/ASTM D8147-2017)

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BSR/ASTM E176-202x, Terminology of Fire Standards (revision of ANSI/ASTM E176-2021)

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Revision

BSR/ASTM E691-202x, Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method (revision of ANSI/ASTM E691-2020)

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Revision

BSR/ASTM E906/E906M-202x, Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using a Thermopile Method (revision of ANSI/ASTM E906/E906M-2017)

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Revision

BSR/ASTM E1474-202x, Test Method for Determining the Heat Release Rate of Upholstered Furniture and Mattress Components or Composites Using a Bench Scale Oxygen Consumption Calorimeter (revision of ANSI/ASTM E1474-2020A)

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BSR/ASTM E1590-202x, Test Method for Fire Testing of Mattresses (revision of ANSI/ASTM E1590-2017)

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Revision

BSR/ASTM E1678-202x, Test Method for Measuring Smoke Toxicity for Use in Fire Hazard Analysis (revision of ANSI/ASTM E1678-2021)

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Revision

BSR/ASTM E2032-202x, Guide for Extension of Data From Fire Resistance Tests Conducted in Accordance with ASTM E119 (revision of ANSI/ASTM E2032-2009 (R2017))

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Revision

BSR/ASTM E2102-202x, Test Method for Measurement of Mass Loss and Ignitability for Screening Purposes Using a Conical Radiant Heater (revision of ANSI/ASTM E2102-2017)

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Revision

BSR/ASTM E2280-202x, Guide for Fire Hazard Assessment of the Effect of Upholstered Seating Furniture Within Patient Rooms of Health Care Facilities (revision of ANSI/ASTM E2280-2017)

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Revision

BSR/ASTM E2489-202x, Practice for Statistical Analysis of One-Sample and Two-Sample Interlaboratory Proficiency Testing Programs (revision of ANSI/ASTM E2489-2016)

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Revision

BSR/ASTM F1015-202x, Test Method for Relative Abrasiveness of Synthetic Turf Playing Surfaces (revision of ANSI/ASTM F1015-2003 (R2017))

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Revision

BSR/ASTM F1114-202x, Specification for Heat Sanitizing Commercial Pot, Pan, and Utensil Stationary Rack Type Water-Driven Rotary Spray (revision of ANSI/ASTM F1114-2016)

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Revision

BSR/ASTM F1150-202x, Specification for Commercial Food Waste Pulper and Waterpress Assembly (revision of ANSI/ASTM F1150-2016)

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Revision

BSR/ASTM F1202-202x, Specification for Washing Machines, Heat Sanitizing, Commercial, Pot, Pan, and Utensil Vertically Oscillating Arm Type (revision of ANSI/ASTM F1202-2016)

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Revision

BSR/ASTM F1203-202x, Specification for Washing Machines - Pot, Pan, and Utensil, Heat Sanitizing, Commercial Rotary Conveyor Type (revision of ANSI/ASTM F1203-2016)

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Revision

BSR/ASTM F1776-202x, Specification for Eye Protective Devices for Paintball Sports (revision of ANSI/ASTM F1776-2019)

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Revision

BSR/ASTM F1878-202x, Guide for Escort Vessel Evaluation and Selection (revision of ANSI/ASTM F1878-2009 (R2015))

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BSR/ASTM F2337-202x, Test Method for Treestand Fall Arrest System (revision of ANSI/ASTM F2337-2020)

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Revision

BSR/ASTM F2479-202x, Guide for Specification, Purchase, Installation and Maintenance of Poured-In-Place Playground Surfacing (revision of ANSI/ASTM F2479-2017)

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BSR/ASTM F2645-202x, Specification for Bun Slicing Machines (revision of ANSI/ASTM F2645-2016)

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Revision

BSR/ASTM F2646-202x, Specification for Bread Slicing Machines (revision of ANSI/ASTM F2646-2016)

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Revision

BSR/ASTM F2879-202x, Specification for Eye Protective Devices for Air Soft Sports (revision of ANSI/ASTM F2879-2019)

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BSR/ASTM F2940-202x, Practice for Air Soft Field Operation (revision of ANSI/ASTM F2940-2013 (R2017))

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Revision

BSR/ASTM F3012-202x, Specification for Loose-Fill Rubber for Use as a Playground Safety Surface under and around Playground Equipment (revision of ANSI/ASTM F3012-2014)

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Revision

BSR/ASTM F3215-202x, Specification for Food Waste Dehydrators (revision of ANSI/ASTM F3215-2016)

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AWS (American Welding Society)

8669 NW 36th Street, Suite 130, Miami, FL 33166-6672 | mdiaz@aws.org, www.aws.org

New Standard

BSR/AWS C6.3M/C6.3-202x, Recommended Practice for Friction Stir Welding (new standard)

This Standard provides recommended practices intended to be applicable to all industries for friction stir welding of aluminum and magnesium alloys and addresses design considerations, fabrication, and quality assurance.

Single copy price: \$33.00

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AWS (American Welding Society)

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Revision

BSR/AWS A5.31M/A5.31-202x, Specification for Fluxes for Brazing and Braze Welding (revision of ANSI/AWS A5.31M/A5.31-2012)

This specification prescribes the requirements for classification of eighteen fluxes for brazing and braze welding. They are classified according to the filler metal, form, and activity temperature range. Classification is in accordance with a classification system that employs the designator "FB" to indicate fluxes for brazing and braze welding applications. In addition to selected tests for each classification, major topics include general requirements, testing procedures, and packaging requirements. A guide is appended to the specification as a source of information concerning the classification system employed and the intended use of the brazing fluxes. This specification makes use of both U.S. Customary Units and the International System of Units (SI). Since these are not equivalent, each system must be used independently of the other.

Single copy price: \$36.00 (non-members)/\$26.00 (AWS members)

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HL7 (Health Level Seven)

3300 Washtenaw Avenue, Suite 227, Ann Arbor, MI 48104 | Karenvan@HL7.org, www.hl7.org

Reaffirmation

BSR/HL7 V3 CTS, R2-2015 (R202x), HL7 Version 3 Standard: Common Terminology Services, Release 2 (reaffirmation of ANSI/HL7 V3 CTS, R2-2015)

This document describes the requirements for the representation, access, and maintenance of terminology content. This release is now aligned with the terms and definitions present with the Core Principles and Properties of HL7 Version 3 Models. Other enhancements based on implementation experience not impacting the functional scope were added as were clarifications on the minimal requirements to meet various HL7 CTS2 conformance profiles.

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

NECA (National Electrical Contractors Association)

1201 Pennsylvania Avenue, Suite 1200, Washington, DC 20004 | Aga.golriz@necanet.org, www.neca-neis.org

New Standard

BSR/NECA LPI 781-202x, Recommended Practice for Installing and Maintaining Lightning Protection Systems (new standard)

This standard covers quality and performance criteria and best practices for lightning protection system design and installation for both new construction and existing structures. The fundamental components of lightning protection systems are covered as well as fundamental information related to lightning protection system design and system maintenance.

Single copy price: \$30.00 (NECA Members)/\$60.00 (Non-members)

Obtain an electronic copy from: neis@necanet.org

Order from: Aga Golriz; Aga.golriz@necanet.org

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

Comment Deadline: December 20, 2021

NEMA (ASC C136) (National Electrical Manufacturers Association)

1300 North 17th Street, Suite 900, Rosslyn, VA 22209 | David.Richmond@nema.org, www.nema.org

Reaffirmation

BSR C136.19-2017 (R202x), Roadway and Area Lighting Equipment - High-Pressure Sodium (HPS) and Retrofit HPS Lamps for Mercury Ballasts - Guide for Selection (reaffirmation of ANSI C136.19-2017)

This standard covers the selection of high-pressure sodium lamps recommended for use in roadway and area lighting equipment.

Single copy price: \$50.00

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

Order from: David Richmond; David.Richmond@nema.org

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

SCTE (Society of Cable Telecommunications Engineers)

140 Philips Rd, Exton, PA 19341 | kcooney@scte.org, www.scte.org

Reaffirmation

BSR/SCTE 56-2016 (R202x), Digital Multiprogram Distribution by Satellite (reaffirmation of ANSI/SCTE 56-2016) Satellite Digital TV systems have shown their advantages with respect to the analog TV allowing a more efficient use of the satellite frequency spectrum available and establishing a more robust scenario with respect to interference protection.

Single copy price: \$50.00

Obtain an electronic copy from: admin@standards.scte.org

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

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

SCTE (Society of Cable Telecommunications Engineers)

140 Philips Rd, Exton, PA 19341 | kcooney@scte.org, www.scte.org

Reaffirmation

BSR/SCTE 65-2016 (R202x), Service Information Delivered Out-Of-Band for Digital Cable Television (reaffirmation of ANSI/SCTE 65-2016)

This specification defines SI tables delivered via an out-of-band path to support service selection and navigation by digital cable set-top boxes and other "digital cable-ready" devices. The SI tables defined in this standard are formatted in accordance with the Program Specific Information (PSI) data structures defined in MPEG-2 Systems.

Single copy price: \$50.00

Obtain an electronic copy from: admin@standards.scte.org

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

Comment Deadline: December 20, 2021

SCTE (Society of Cable Telecommunications Engineers)

140 Philips Rd, Exton, PA 19341 | kcooney@scte.org, www.scte.org

Reaffirmation

BSR/SCTE 165-2-2016 (R202x), IPCablecom 1.5 Part 2: Audio/Video Codecs (reaffirmation of ANSI/SCTE 165-2-2016)

This document addresses interfaces between IPCablecom client devices for audio and video communication. Specifically, it identifies the audio and video codecs necessary to provide the highest quality and the most resource-efficient service delivery to the customer. This document also specifies the performance required in client devices to support future IPCablecom codecs. Additionally, this document describes a suggested methodology for optimal network support for codecs.

Single copy price: \$50.00

Obtain an electronic copy from: admin@standards.scte.org

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

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SCTE (Society of Cable Telecommunications Engineers)

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Reaffirmation

BSR/SCTE 165-3-2016 (R202x), IPCablecom 1.5 Part 3: Network-Based Call Signaling Protocol (reaffirmation of ANSI/SCTE 165-3-2016)

This specification describes a profile of the Media Gateway Control Protocol (MGCP) for IPCablecom embedded clients, which we will refer to as the IPCablecom Network-based Call Signaling (NCS) protocol. MGCP is a call-signaling protocol for use in a centralized call-control architecture, and assumes relatively simple client devices. The call-signaling protocol is one layer of the overall IPCablecom suite of specifications and relies upon companion protocol specifications to provide complete end-to-end IPCablecom functionality. The scope of NCS is currently only embedded Voice-Over-IP client devices in an IPCablecom environment and the NCS profile has therefore simplified (and in some cases, modified) the base MGCP 1.0 protocol accordingly.

Single copy price: \$50.00

Obtain an electronic copy from: admin@standards.scte.org

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

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SCTE (Society of Cable Telecommunications Engineers)

140 Philips Rd, Exton, PA 19341 | kcooney@scte.org, www.scte.org

Reaffirmation

BSR/SCTE 165-12-2016 (R202x), IPCablecom 1.5 Part 12: PSTN Gateway Call Signaling Protocol (reaffirmation of ANSI/SCTE 165-12-2016)

This document describes an IPCablecom profile of an application programming interface called a Media Gateway Control Interface (MGCI) and a corresponding protocol (MGCP) for controlling voice-over-IP (VoIP) PSTN Gateways from external call control elements. The MGCP assumes a call control architecture where the call control "intelligence" is outside the gateways and handled by external call control elements. The IPCablecom profile as described in this document will be referred to as the IPCablecom Trunking Gateway Control Protocol (TGCP).

Single copy price: \$50.00

Obtain an electronic copy from: admin@standards.scte.org

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

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

Comment Deadline: December 20, 2021

SCTE (Society of Cable Telecommunications Engineers)

140 Philips Rd, Exton, PA 19341 | kcooney@scte.org, www.scte.org

Reaffirmation

BSR/SCTE 165-18-2016 (R202x), IPCablecom 1.5 Part 18: CMS to CMS Signaling (reaffirmation of ANSI/SCTE 165-18-2016)

This specification describes the IPCablecom Call Management Server (CMS) to CMS Signaling protocol intended for use by a CMS to communicate with another CMS in order to support packet-based voice and other real-time multimedia applications.

Single copy price: \$50.00

Obtain an electronic copy from: admin@standards.scte.org

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

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

SCTE (Society of Cable Telecommunications Engineers)

140 Philips Rd, Exton, PA 19341 | kcooney@scte.org, www.scte.org

Reaffirmation

BSR/SCTE 165-21-2016 (R202x), IPCablecom 1.5 Part 21: Signaling Extension MIB (reaffirmation of ANSI/SCTE 165-21-2016)

New objects that are being introduced beyond IPCablecom 1.0 for Signaling MIBS are being grouped in this document so that the additional changes made can be tracked easily.

Single copy price: \$50.00

Obtain an electronic copy from: admin@standards.scte.org

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

SCTE (Society of Cable Telecommunications Engineers)

140 Philips Rd, Exton, PA 19341 | kcooney@scte.org, www.scte.org

Reaffirmation

BSR/SCTE 173-1-2017 (R202x), Requirements for Preferential Telecommunications over IPCablecom Networks (reaffirmation of ANSI/SCTE 173-1-2017)

The objective of this standard is to provide an initial set of requirements for preferential telecommunications within IPCablecom networks. Aspects of preferential telecommunications include provisions for Authentication and Priority (Special Handling). These requirements do not apply to ordinary emergency calls such as people calling police, fire department, ambulance, etc. This standard defines requirements for capabilities which, when implemented, should help support emergency telecommunication services.

Single copy price: \$50.00

Obtain an electronic copy from: admin@standards.scte.org

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Comment Deadline: December 20, 2021

SCTE (Society of Cable Telecommunications Engineers)

140 Philips Rd, Exton, PA 19341 | kcooney@scte.org, www.scte.org

Reaffirmation

BSR/SCTE 173-2-2017 (R202x), Framework for Implementing Preferential Telecommunications in IPCablecom and IPCablecom2 Networks (reaffirmation of ANSI/SCTE 173-2-2017)

This standard provides a framework for implementing preferential capabilities in IPCablecom and IPCablecom2 networks. The approach of this standard is to define a framework for capabilities that can be utilized to meet the requirements in ANSI/SCTE 173-1 2010 and forms the basis for detailed IPCablecom and IPCablecom2 standards in support of preferential telecommunications.

Single copy price: \$50.00

Obtain an electronic copy from: admin@standards.scte.org

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

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

SCTE (Society of Cable Telecommunications Engineers)

140 Philips Rd, Exton, PA 19341 | kcooney@scte.org, www.scte.org

Reaffirmation

BSR/SCTE 173-3-2017 (R202x), Specification for Authentication in Preferential Telecommunications over IPCablecom2 Networks (reaffirmation of ANSI/SCTE 173-3-2017)

This standard is one of a series of standards to enable support for preferential telecommunication services over IPCablecom networks. It defines the specifications for authentication in preferential telecommunications over IPCablecom2 networks. These specifications satisfy the requirements defined in SCTE 173-1 2010.

Single copy price: \$50.00

Obtain an electronic copy from: admin@standards.scte.org

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

SCTE (Society of Cable Telecommunications Engineers)

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Reaffirmation

BSR/SCTE 173-4-2017 (R202x), Specification for Priority in Preferential Telecommunications over IPCablecom2 Networks (reaffirmation of ANSI/SCTE 173-4-2017)

This standard is one of a series of Standards to enable support for preferential telecommunication services over IPCablecom2 networks. It defines the specifications for priority for preferential telecommunication services over IPCablecom2 networks. These specifications satisfy the requirements defined in SCTE 173-1 2010.

Single copy price: \$50.00

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Comment Deadline: December 20, 2021

SCTE (Society of Cable Telecommunications Engineers)

140 Philips Rd, Exton, PA 19341 | kcooney@scte.org, www.scte.org

Revision

BSR/SCTE 63-202x, Test Method for Voltage/Spark Test of Outer Jacket (revision of ANSI/SCTE 63-2015)

This procedure specifies the spark test method to be used in determining if the outer jacket of a coaxial cable will withstand a specified voltage.

Single copy price: \$50.00

Obtain an electronic copy from: admin@standards.scte.org

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

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

UL (Underwriters Laboratories)

333 Pfingsten Road, Northbrook, IL 60062-2096 | mitchell.gold@ul.org, <https://ul.org/>

National Adoption

BSR/UL 61800-5-2-202x, Standard for Safety for Adjustable Speed Electrical Power Drive Systems - Part 5-2:

Safety Requirements - Functional (national adoption with modifications of IEC 61800-5-2)

This standard specifies requirements and makes recommendations for the design and development, integration, and validation of safety-related power drive systems (PDS(SR)) in terms of their functional safety considerations.

It applies to adjustable speed electrical power drive systems covered by the other parts of the IEC 61800 series of standards as referred in IEC 61800-2.

Single copy price: Free

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UL (Underwriters Laboratories)

333 Pfingsten Road, Northbrook, IL 60062-2096 | Susan.P.Malohn@ul.org, <https://ul.org/>

National Adoption

BSR/UL 62852-202x, Standard for Connectors for DC-Application in Photovoltaic Systems - Safety Requirements and Tests (national adoption with modifications of IEC 62852)

(1) First edition of the UL IEC-based Standard for Connectors for DC-Application in Photovoltaic Systems - Safety Requirements and Tests, UL 62852, including minimal national differences.

Single copy price: Free

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Comment Deadline: December 20, 2021

UL (Underwriters Laboratories)

12 Laboratory Drive, Research Triangle Park, NC 27709-3995 | griff.edwards@ul.org, <https://ul.org/>

Reaffirmation

BSR/UL 181-2013 (R202x), Standard for Factory-Made Air Ducts and Air Connectors (November 5, 2021)
(reaffirmation of ANSI/UL 181-2013 (R2017))

This proposal covers: (1) Reaffirmation and continuance of the eleventh edition of the Standard for Factory-Made Air Ducts and Air Connectors, UL 181, as an American National Standard.

Single copy price: Free

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UL (Underwriters Laboratories)

12 Laboratory Drive, Research Triangle Park, NC 27709-3995 | griff.edwards@ul.org, <https://ul.org/>

Reaffirmation

BSR/UL 181A-2013 (R202x), Standard for Closure Systems for Use with Rigid Air Ducts (November 5, 2021)
(reaffirmation of ANSI/UL 181A-2013 (R2017))

This proposal covers: (1) Reaffirmation and continuance of the fourth edition of the Standard for Closure Systems for Use with Rigid Air Ducts, UL 181A, as an American National Standard.

Single copy price: Free

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UL (Underwriters Laboratories)

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Reaffirmation

BSR/UL 181B-2013 (R202x), Standard for Closure Systems for Use with Flexible Air Ducts and Air Connectors (November 5, 2021) (reaffirmation of ANSI/UL 181B-2013 (R2017))

This proposal covers: (1) Reaffirmation and continuance of the third edition of the Standard for Closure Systems for Use with Flexible Air Ducts and Air Connectors, UL 181B, as an American National Standard.

Single copy price: Free

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Comment Deadline: December 20, 2021

UL (Underwriters Laboratories)

12 Laboratory Drive, Research Triangle Park, NC 27709-3995 | patricia.a.sena@ul.org, <https://ul.org/>

Revision

BSR/AAMI/UL 2800-1-202X, Standard for Safety for Medical Device Interoperability (revision and partition of ANSI/AAMI/UL 2800-1-2019)

The second edition of the Standard for Medical Device Interoperability, AAMI/UL 2800-1, is being proposed with only editorial changes to accommodate a reorganization into part standards. AAMI/UL 2800-1 is being proposed as UL 2800-1, 2nd edition; UL 2800-1-1, 1st edition; UL 2800-1-2, 1st edition; and UL 2800-1-3, first edition. This Standard is applicable to interoperable medical products, including assembled systems of interoperable medical products that comprise or are intended to be incorporated into interoperable medical systems within an interoperable environment. This Standard specifies a baseline set of interoperability lifecycle requirements for assuring safe and secure interoperability for interoperable medical systems.

Single copy price: Free

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UL (Underwriters Laboratories)

12 Laboratory Drive, Research Triangle Park, NC 27709-3995 | patricia.a.sena@ul.org, <https://ul.org/>

Revision

BSR/AAMI/UL 2800-1-1-202x, Standard for Safety for Risk Concerns for Interoperable Medical Products (revision and partition of ANSI/AAMI/UL 2800-1-2019)

The second edition of the Standard for Medical Device Interoperability, AAMI/UL 2800-1, is being proposed with only editorial changes to accommodate a reorganization into part standards. AAMI/UL 2800-1 is being proposed as UL 2800-1, 2nd edition, UL 2800-1-1, 1st edition, UL 2800-1-2, 1st edition, and UL 2800-1-3, first edition. AAMI/UL 2800-1-1 is applicable to interoperable medical products, including assembled systems of interoperable medical products that comprise or are intended to be incorporated into interoperable medical systems within an interoperable environment. This Standard specifies a baseline set of risk concerns for assuring safe and secure interoperability for interoperable medical systems.

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Comment Deadline: December 20, 2021

UL (Underwriters Laboratories)

12 Laboratory Drive, Research Triangle Park, NC 27709-3995 | patricia.a.sena@ul.org, <https://ul.org/>

Revision

BSR/AAMI/UL 2800-1-2-202X, Standard for Safety for Interoperable Item Development Life Cycle (revision and partition of ANSI/AAMI/UL 2800-1-2019)

The second edition of the Standard for Medical Device Interoperability, AAMI/UL 2800-1, is being proposed with only editorial changes to accommodate a reorganization into part standards. AAMI/UL 2800-1 is being proposed as UL 2800-1, 2nd edition, UL 2800-1-1, 1st edition, UL 2800-1-2, 1st edition, and UL 2800-1-3, first edition.

AAMI/UL 2800-1-2 is applicable to interoperable medical products, including assembled systems of interoperable medical products that comprise or are intended to be incorporated into interoperable medical systems within an interoperable environment. This Standard specifies a baseline set of development lifecycle requirements for assuring safe and secure interoperability for interoperable items.

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UL (Underwriters Laboratories)

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Revision

BSR/AAMI/UL 2800-1-3-202X, Standard for Safety for Interoperable Item Integration Life Cycle (revision and partition of ANSI/AAMI/UL 2800-1-2019)

The second edition of the Standard for Medical Device Interoperability, AAMI/UL 2800-1, is being proposed with only editorial changes to accommodate a reorganization into part standards. AAMI/UL 2800-1 is being proposed as UL 2800-1, 2nd edition, UL 2800-1-1, 1st edition, UL 2800-1-2, 1st edition, and UL 2800-1-3, first edition.

AAMI/UL 2800-1-3 is applicable to interoperable medical products, including assembled systems of interoperable medical products that comprise or are intended to be incorporated into interoperable medical systems within an interoperable environment. This Standard specifies a baseline set of integration lifecycle requirements for assuring safe and secure interoperability of interoperable items assembled or otherwise integrated into interoperable medical systems.

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Comment Deadline: December 20, 2021

UL (Underwriters Laboratories)

12 Laboratory Drive, Research Triangle Park, NC 27709-3995 | Nicolette.A.Weeks@ul.org, <https://ul.org/>

Revision

BSR/UL 10C-202x, Standard for Positive Pressure Fire Tests of Door Assemblies (November 5, 2021) (revision of ANSI/UL 10C-2016 (R2021))

This proposal covers: (1) Thermocouple Pads and (2) Revision to 9.3.

Single copy price: Free

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Comment Deadline: January 4, 2022

ASME (American Society of Mechanical Engineers)

Two Park Avenue, M/S 6-2B, New York, NY 10016-5990 | ansibox@asme.org, www.asme.org

New Standard

BSR/ASME Y14.46202x-202x, Product Definition Practices for Additive Manufacturing (new standard)

This Standard covers the definitions of terms and features unique to additive manufacturing (AM) technologies with recommendations for their uniform specification in product definition data and in related documents.

Single copy price: Free

Order from: <https://cstools.asme.org/csconnect/PublicReviewPage.cfm>

Send comments (copy psa@ansi.org) to: Fredric Constantino; constantinof@asme.org

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

700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

National Adoption

INCITS/ISO/IEC 14776-224:2019 [202x], Information Technology - Small Computer System Interface (SCSI) - Part 224: Fibre Channel Protocol For SCSI, Fourth Version (FCP-4) (identical national adoption of ISO/IEC 14776-224:2019)

Defines the Small Computer System Interface (SCSI) Fibre Channel Protocol (FCP). This standard defines how the Fibre Channel services and the defined Information Units (IUs) are used to perform the services defined by the SCSI Architecture Model - 5 (SAM-5). This fourth version includes additions and clarifications to the third version (ISO/IEC 14776-223:2008), removes information that is now contained in other standards, and describes additional error recovery capabilities for the Fibre Channel Protocol.

Single copy price: \$250.00

Obtain an electronic copy from: <http://webstore.ansi.org/>

Order from: <http://webstore.ansi.org/>

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Comment Deadline: January 4, 2022

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

700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

National Adoption

INCITS/ISO/IEC 14776-232:2001 [202x], Information Technology - Small Computer System Interface (SCSI) - Part 232: Serial Bus Protocol-2 (SBP-2) (identical national adoption of ISO/IEC 14776-232:2001)

Defines a protocol for the transport of commands and data over High-Performance Serial Bus. The transport protocol, Serial Bus Protocol 2 or SBP-2, requires implementations to conform to the requirements of this standard as well as to ISO/IEC 13213:1994 and permits the exchange of commands, data, and status between initiators and targets connected to Serial Bus.

Single copy price: \$232.00

Obtain an electronic copy from: <http://webstore.ansi.org/>

Order from: <http://webstore.ansi.org/>

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

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

700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

National Adoption

INCITS/ISO/IEC 14776-415:2019 [202x], Information Technology - Small Computer System Interface (SCSI) - Part 415: SCSI Architecture Model - 5 (SAM-5) (identical national adoption of ISO/IEC 14776-415:2019)

Defines PHY and MAC specifications for high-data-rate wireless connectivity (typically over 200 Mbps) with fixed, portable, and moving devices. Data rates are high enough to satisfy a set of consumer multimedia industry needs, as well as to support emerging wireless switched point-to-point and high-rate close proximity point-to-point applications.

Single copy price: \$250.00

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

700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

National Adoption

INCITS/ISO/IEC 14776-481:2019 [202x], Information Technology - Small Computer System Interface (SCSI) - Part 481: Security Features For SCSI Commands (SFSC) (identical national adoption of ISO/IEC 14776-481:2019)

Defines a device model that is applicable to all SCSI devices. Other command standards expand on the general SCSI device model in ways appropriate to specific types of SCSI devices. ISO/IEC 14776 (all parts) specifies the interfaces, functions, and operations necessary to ensure interoperability between conforming SCSI implementations. This document is a functional description. Conforming implementations employ any design technique that does not violate interoperability. Defines security features for use by all SCSI devices. Defines the security model that is basic to every device model and the parameter data that applies to any device model.

Single copy price: \$250.00

Obtain an electronic copy from: <http://webstore.ansi.org/>

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Comment Deadline: January 4, 2022

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

700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

National Adoption

INCITS/ISO/IEC 23001-9:2016 [202x], Information technology - MPEG systems technologies - Part 9: Common encryption of MPEG-2 transport streams (identical national adoption of ISO/IEC 23001-9:2016)

Specifies a common media encryption format for use in MPEG-2 transport streams. This encryption format is intended to be used in an interoperable way with media encrypted using the format described by ISO/IEC 23001-7. ISO/IEC 23001-9:2016 allows conversion between encrypted MPEG-2 transport streams and encrypted ISO base media file format files without re-encryption.

Single copy price: \$73.00

Obtain an electronic copy from: <http://webstore.ansi.org/>

Order from: <http://webstore.ansi.org/>

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

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

700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

National Adoption

INCITS/ISO/IEC 23001-1:2006/COR1:2007 [202x], Information technology - MPEG systems technologies - Part 1: Binary MPEG format for XML - Technical Corrigendum 1 (identical national adoption of ISO/IEC 23001-1:2006/COR1:2007)

Technical Corrigendum 1 to ISO/IEC 23001-1:2006.

Single copy price: Free

Obtain an electronic copy from: <http://webstore.ansi.org/>

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National Adoption

INCITS/ISO/IEC 23001-1:2006/COR2:2007 [202x], Information technology - MPEG systems technologies - Part 1: Binary MPEG format for XML - Technical Corrigendum 2 (identical national adoption of ISO/IEC 23001-1:2006/COR2:2007)

Technical Corrigendum 2 to ISO/IEC 23001-1:2006.

Single copy price: Free

Obtain an electronic copy from: <http://webstore.ansi.org/>

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Comment Deadline: January 4, 2022

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

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National Adoption

INCITS/ISO/IEC 23008-2:2020/AM1:2021 [202x], Information technology - High efficiency coding and media delivery in heterogeneous environments - Part 2: High efficiency video coding - Amendment 1: Shutter interval information SEI message (identical national adoption of ISO/IEC 23008-2:2020/AM1:2021)

Amendment 1 to ISO/IEC 23008-2:2020.

Single copy price: \$20.00

Obtain an electronic copy from: <http://webstore.ansi.org/>

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

700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

National Adoption

INCITS/ISO/IEC 27033-6:2016 [202x], Information Technology - Security Techniques - Network Security - Part 6: Securing Wireless IP Network Access (identical national adoption of ISO/IEC 27033-6:2016)

Describes the threats, security requirements, security control, and design techniques associated with wireless networks. It provides guidelines for the selection, implementation, and monitoring of the technical controls necessary to provide secure communications using wireless networks. The information in this part of ISO/IEC 27033 is intended to be used when reviewing or selecting technical security architecture/design options that involve the use of wireless network in accordance with ISO/IEC 27033-2.

Single copy price: \$149.00

Obtain an electronic copy from: <http://webstore.ansi.org/>

Order from: <http://webstore.ansi.org/>

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

700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

National Adoption

INCITS/ISO/IEC 30134-1:2016 [202x], Information technology - Data centres - Key performance indicators - Part 1: Overview and general requirements (identical national adoption of ISO/IEC 30134-1:2016)

Specifies the following for the other parts of ISO/IEC 30134: a common structure; definitions, terminology and boundary conditions for KPIs of data centre resource usage effectiveness and efficiency; common requirements for KPIs of data centre resource usage effectiveness and efficiency; common objectives for KPIs of the data centre resource effectiveness and efficiency; general information regarding the use of KPIs of data centre resource usage effectiveness and efficiency.

Single copy price: \$73.00

Obtain an electronic copy from: <http://webstore.ansi.org/>

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Comment Deadline: January 4, 2022

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

700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

National Adoption

INCITS/ISO/IEC 30134-2:2016 [202x], Information technology - Data centres - Key performance indicators - Part 2: Power usage effectiveness (PUE) (identical national adoption of ISO/IEC 30134-2:2016)

Defines the power usage effectiveness (PUE) of a data centre, introduces PUE measurement categories, describes the relationship of this KPI to a data centre's infrastructure, information technology equipment, and information technology operations, defines the measurement, the calculation, and the reporting of the parameter, and provides information on the correct interpretation of the PUE. PUE derivatives are described in Annex D.

Single copy price: \$149.00

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

700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

National Adoption

INCITS/ISO/IEC 30134-3:2016 [202x], Information technology - Data centres - Key performance indicators - Part 3: Renewable energy factor (REF) (identical national adoption of ISO/IEC 30134-3:2016)

Defines the renewable energy factor (REF) of a data centre, specifies a methodology to calculate and to present the REF, and provides information on the correct interpretation of the REF.

Single copy price: \$73.00

Obtain an electronic copy from: <http://webstore.ansi.org/>

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700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

National Adoption

INCITS/ISO/IEC 30134-1:2016/AM1:2018 [202x], Information technology - Data centres - Key performance indicators - Part 1: Overview and general requirements - Amendment 1 (identical national adoption of ISO/IEC 30134-1:2015/AM1:2018)

Amendment 1 to ISO/IEC 30134-1:2016.

Single copy price: \$20.00

Obtain an electronic copy from: <http://webstore.ansi.org/>

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Comment Deadline: January 4, 2022

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

700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

National Adoption

INCITS/ISO/IEC 30134-2:2016/AM1:2018 [202x], Information technology - Data centres - Key performance indicators - Part 2: Power usage effectiveness (PUE) - Amendment 1 (identical national adoption of ISO/IEC 30134-2:2016/AM1:2018)

Amendment 1 to ISO/IEC 30134-2:2016.

Single copy price: \$20.00

Obtain an electronic copy from: <http://webstore.ansi.org/>

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

700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

National Adoption

INCITS/ISO/IEC 30134-3:2016/AM1:2018 [202x], Information technology - Data centres - Key performance indicators - Part 3: Renewable energy factor (REF) - Amendment 1 (identical national adoption of ISO/IEC 30134-3:2016/AM1:2018)

Amendment 1 to ISO/IEC 30134-3:2016.

Single copy price: \$20.00

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700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

National Adoption

INCITS/ISO/IEC 23544:2021 [202x], Information Technology - Data centres - Application Platform Energy Effectiveness (APEE) (identical national adoption of ISO/IEC 23544:2021)

Document specifies application platform energy effectiveness (APEE) as a Key Performance Indicator (KPI) which quantifies the energy effectiveness of an application platform for an IT service in data centres. This KPI evaluates the energy consumption of an application platform prior to deployment. The purpose of this KPI is to measure the energy effectiveness of a set of target IT equipment, operating systems and middleware, to enable the selection of an energy effective IT stack.

Single copy price: \$149.00

Obtain an electronic copy from: <http://webstore.ansi.org/>

Order from: <http://webstore.ansi.org/>

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

Comment Deadline: January 4, 2022

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

700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

National Adoption

INCITS/ISO/IEC 29151:2017 [202x], Information Technology - Security Techniques - Code of Practice for Personally Identifiable Information Protection (identical national adoption of ISO/IEC 29151:2017)

Establishes control objectives, controls and guidelines for implementing controls, to meet the requirements identified by a risk-and-impact assessment related to the protection of personally identifiable information (PII).

Single copy price: \$200.00

Obtain an electronic copy from: <http://webstore.ansi.org/>

Order from: <http://webstore.ansi.org/>

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

UL (Underwriters Laboratories)

333 Pfingsten Road, Northbrook, IL 60062-2096 | alan.t.mcgrath@ul.org, <https://ul.org/>

National Adoption

BSR/UL 60335-2-24-202X, Standard for household and similar electrical appliances - Safety - Part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers (identical national adoption of IEC 60335-2-24 and revision of ANSI/UL 60335-2-24-2020)

(1) ANSI approval of the 3rd edition of UL 60335-2-24; and (2) Replace the ISO 7010 W021 flammable refrigerant label with the United Nations GHS red diamond flame symbol in all HVAC/R standards.

Single copy price: Free

Obtain an electronic copy from: <https://csds.ul.com/Home/ProposalsDefault.aspx>

Order from: <http://www.shopulstandards.com>

Send comments (copy psa@ansi.org) to: Follow the instructions in the following website to enter comments into the CSDS Work Area: <https://csds.ul.com/Home/ProposalsDefault.aspx>

Project Withdrawn

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:

ASABE (American Society of Agricultural and Biological Engineers)

2950 Niles Road, Saint Joseph, MI 49085 | vangilder@asabe.org, <https://www.asabe.org/>

ANSI/ASAE S478.1-2012 (R2016), Roll-Over Protective Structures (ROPS) for Compact Utility Tractors (withdrawal of ANSI/ASAE S478.1-2012 (R2016))

Inquiries may be directed to Carla VanGilder; vangilder@asabe.org

ASTM (ASTM International)

100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 | accreditation@astm.org, www.astm.org

BSR/ASTM F628-202x, Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe with a Cellular Core (revision of ANSI/ASTM F628-2018)

Inquiries may be directed to Corice Leonard; accreditation@astm.org

Project Withdrawn

ECIA (Electronic Components Industry Association)

13873 Park Center Road, Suite 315, Herndon, VA 20171 | ldonohoe@ecianow.org, www.ecianow.org

BSR/EIA 198-2-F-202x, Ceramic Dielectric Capacitors Classes I, II, III, and IV - Part II: Test Methods (revision and redesignation of ANSI/EIA 198-2-E-2014)

Inquiries may be directed to Laura Donohoe; ldonohoe@ecianow.org

Notice of Withdrawal: ANS at least 10 years past approval date

The following American National Standards have not been revised or reaffirmed within ten years from the date of their approval as American National Standards and accordingly are withdrawn:

AHRI (Air-Conditioning, Heating, and Refrigeration Institute)

2311 Wilson Boulevard, Suite 400, Arlington, VA 22201-3001 | kbest@ahrinet.org, www.ahrinet.org

ANSI/AHRI Standard 530-2011, Rating of Sound and Vibration for Refrigerant Compressors

Inquiries may be directed to Karl Best; kbest@ahrinet.org

Withdrawal of an ANS by ANSI-Accredited Standards Developer

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

ASTM (ASTM International)

100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 | accreditation@astm.org, www.astm.org

ANSI/ASTM F628-2018, Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe with a Cellular Core

Questions may be directed to: Corice Leonard; accreditation@astm.org

GTESS (Georgia Institute of Technology Energy & Sustainability Services)

75 Fifth Street N.W, Suite 300, Atlanta, GA 30308 | Moon.Kim@gtri.gatech.edu, www.innovate.gatech.edu

ANSI/ISO/MSE 50001-2011, Energy management systems - Requirements with guidance for use

Inquiries may be directed to Moon Kim; Moon.Kim@gtri.gatech.edu

GTESS (Georgia Institute of Technology Energy & Sustainability Services)

75 Fifth Street N.W, Suite 300, Atlanta, GA 30308 | Moon.Kim@gtri.gatech.edu, www.innovate.gatech.edu

ANSI/ISO/MSE 50002-2014, Energy audits

Inquiries may be directed to Moon Kim; Moon.Kim@gtri.gatech.edu

GTESS (Georgia Institute of Technology Energy & Sustainability Services)

75 Fifth Street N.W, Suite 300, Atlanta, GA 30308 | Moon.Kim@gtri.gatech.edu, www.innovate.gatech.edu

ANSI/ISO/MSE 50003-2014, Energy management systems - Requirements for bodies providing audit and certification of energy management systems

Inquiries may be directed to Moon Kim; Moon.Kim@gtri.gatech.edu

Withdrawal of an ANS by ANSI-Accredited Standards Developer

GTESS (Georgia Institute of Technology Energy & Sustainability Services)

75 Fifth Street N.W, Suite 300, Atlanta, GA 30308 | Moon.Kim@gtri.gatech.edu, www.innovate.gatech.edu

ANSI/ISO/MSE 50004-2014, Energy management systems - Guidance for the implementation, maintenance and improvement of an energy management system

Inquiries may be directed to Moon Kim; Moon.Kim@gtri.gatech.edu

GTESS (Georgia Institute of Technology Energy & Sustainability Services)

75 Fifth Street N.W, Suite 300, Atlanta, GA 30308 | Moon.Kim@gtri.gatech.edu, www.innovate.gatech.edu

ANSI/ISO/MSE 50006-2014, Energy management systems - Measuring energy performance using energy baselines (EnB) and energy performance indicators (EnPI) - General principles and guidance

Inquiries may be directed to Moon Kim; Moon.Kim@gtri.gatech.edu

GTESS (Georgia Institute of Technology Energy & Sustainability Services)

75 Fifth Street N.W, Suite 300, Atlanta, GA 30308 | Moon.Kim@gtri.gatech.edu, www.innovate.gatech.edu

ANSI/ISO/MSE 50015-2014, Measurement and verification of organizational energy performance - General principles and guidance

Inquiries may be directed to Moon Kim; Moon.Kim@gtri.gatech.edu

GTESS (Georgia Institute of Technology Energy & Sustainability Services)

75 Fifth Street N.W, Suite 300, Atlanta, GA 30308 | Moon.Kim@gtri.gatech.edu, www.innovate.gatech.edu

ANSI/MSE/ISO 50047-2016, Determination of energy savings in organizations

Inquiries may be directed to Moon Kim; Moon.Kim@gtri.gatech.edu

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.

AAMI (Association for the Advancement of Medical Instrumentation)

901 N. Glebe Road, Suite 300, Arlington, VA 22203 | celliott@aami.org, www.aami.org

New Standard

ANSI/AAMI CN27-2021, General requirements for Luer activated valves (LAVs) incorporated into medical devices for intravascular applications (new standard) Final Action Date: 10/26/2021

AGMA (American Gear Manufacturers Association)

1001 N Fairfax Street, 5th Floor, Alexandria, VA 22314-1587 | tech@agma.org, www.agma.org

Reaffirmation

ANSI/AGMA 2008-D11 (R2021), Assembling Bevel Gears (reaffirmation of ANSI/AGMA 2008-D11 (R2016)) Final Action Date: 11/1/2021

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

180 Technology Parkway, Peachtree Corners, GA 30092 | mweber@ashrae.org, www.ashrae.org

Addenda

ANSI/ASHRAE Addendum 55d-2020, Thermal Environmental Conditions for Human Occupancy (addenda to ANSI/ASHRAE Standard 55-2020) Final Action Date: 10/29/2021

Addenda

ANSI/ASHRAE Addendum a to ANSI/ASHRAE Standard 169-2020, Climatic Data for Building Design Standards (addenda to ANSI/ASHRAE Standard 169-2013) Final Action Date: 10/29/2021

Addenda

ANSI/ASHRAE Addendum a to Standard 41.10-2020, Standard Methods for Refrigerant Mass Flow Rate Measurements Using Flowmeters (addenda to ANSI/ASHRAE Standard 41.10-2020) Final Action Date: 10/29/2021

Addenda

ANSI/ASHRAE Addendum a to Standard 41.11-2020, Standard Methods for Power Measurement (addenda to ANSI/ASHRAE Standard 41.11-2020) Final Action Date: 10/29/2021

Addenda

ANSI/ASHRAE Addendum k to ANSI/ASHRAE Standard 154-2016, Ventilation for Commercial Cooking Operations (addenda to ANSI/ASHRAE Standard 154-2016) Final Action Date: 10/29/2021

Addenda

ANSI/ASHRAE Addendum l to ANSI/ASHRAE Standard 154-2016, Ventilation for Commercial Cooking Operations (addenda to ANSI/ASHRAE Standard 154-2016) Final Action Date: 10/29/2021

Addenda

ANSI/ASHRAE Addendum m to ANSI/ASHRAE Standard 154-2016, Ventilation for Commercial Cooking Operations (addenda to ANSI/ASHRAE Standard 154-2016) Final Action Date: 10/29/2021

Addenda

ANSI/ASHRAE/ASHE Addendum 170d-2021, Ventilation of Health Care Facilities (addenda to ANSI/ASHRAE/ASHE Standard 170-2021) Final Action Date: 10/29/2021

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

180 Technology Parkway, Peachtree Corners, GA 30092 | cking@ashrae.org, www.ashrae.org

New Standard

ANSI/ASHRAE Standard 164.4-2021, Methods of Test for Commercial and Industrial Adiabatic Humidifiers (new standard) Final Action Date: 10/29/2021

Revision

ANSI/ASHRAE Standard 41.6-2014R, Standard Methods for Humidity Measurements (revision of ANSI/ASHRAE Standard 41.6-2014) Final Action Date: 10/29/2021

ASME (American Society of Mechanical Engineers)

Two Park Avenue, M/S 6-2B, New York, NY 10016-5990 | ansibox@asme.org, www.asme.org

Reaffirmation

ANSI/ASME B18.10-2006 (R2021), Track Bolts and Nuts (reaffirmation of ANSI/ASME B18.10-2006 (R2016)) Final Action Date: 10/28/2021

Reaffirmation

ANSI/ASME B18.31.4M-2009 (R2021), Threaded Rod (Metric Series) (reaffirmation of ANSI/ASME B18.31.4M-2009 (R2017)) Final Action Date: 10/28/2021

Reaffirmation

ANSI/ASME B18.31.5-2011 (R2021), Bent Bolts (Inch Series) (reaffirmation of ANSI/ASME B18.31.5-2011 (R2016)) Final Action Date: 10/28/2021

Reaffirmation

ANSI/ASME B89.1.10M-2001 (R2021), Dial Indicators for Linear Measurements (reaffirmation of ANSI/ASME B89.1.10M-2001 (R2016)) Final Action Date: 10/28/2021

Revision

ANSI/ASME A17.8-2016/CSA B44.8-2021, Standard for wind turbine tower elevators (revision of ANSI/ASME A17.8-2016/CSA B44.8-2016) Final Action Date: 10/27/2021

Revision

ANSI/ASME RTP-1-2021, Reinforced Thermoset Plastic Corrosion-Resistant Equipment (revision of ANSI/ASME RTP-1-2019) Final Action Date: 10/26/2021

BHMA (Builders Hardware Manufacturers Association)

355 Lexington Avenue, 15th Floor, New York, NY 10017-6603 | Kbishop@Kellencompany.com, www.

Revision

ANSI/BHMA A156.22-2021, Standard for Door Gasketing and Edge Seal Systems (revision of ANSI/BHMA A156.22-2017) Final Action Date: 10/28/2021

CTA (Consumer Technology Association)

1919 S. Eads Street, Arlington, VA 22202 | cakkers@cta.tech, www.cta.tech

** Revision*

ANSI/CTA 709.6-A-2021, Control Networking Protocol Specification - Part 6: Application Elements (revision and redesignation of ANSI/CTA 709.6-2015) Final Action Date: 11/1/2021

EOS/ESD (ESD Association, Inc.)

7900 Turin Road, Building 3, Rome, NY 13440 | jkirk@esda.org, www.esda.org

Revision

ANSI/ESD S1.1-2021, ESD Association Standard for the Protection of Electrostatic Discharge Susceptible Items - Wrist Straps (revision of ANSI/ESD S1.1-2013) Final Action Date: 11/2/2021

Revision

ANSI/ESD STM11.13-2021, ESD Association Draft Standard Test Method for the Protection of Electrostatic Discharge Susceptible Items - Two-Point Resistance Measurement (revision of ANSI/ESD STM11.13-2018) Final Action Date: 10/28/2021

ESTA (Entertainment Services and Technology Association)

271 Cadman Plaza, P.O. Box 23200, Brooklyn, NY 11202-3200 | standards@esta.org, www.esta.org

Reaffirmation

ANSI E1.16-2002 (R2021), Entertainment Technology - Configuration Standard for Metal-Halide Ballast Power Cables (reaffirmation of ANSI E1.16-2002 (R2017)) Final Action Date: 10/28/2021

Reaffirmation

ANSI E1.24-2012 (R2021), Entertainment Technology - Dimensional Requirements for Stage Pin Connectors (reaffirmation of ANSI E1.24-2012) Final Action Date: 10/28/2021

Reaffirmation

ANSI E1.55-2016 (R2021), Standard for Theatrical Makeup Mirror Lighting (reaffirmation of ANSI E1.55-2016) Final Action Date: 11/1/2021

IAPMO (Z) (International Association of Plumbing & Mechanical Officials)

4755 East Philadelphia Street, Ontario, CA 91761 | hugo.aguilar@iapmo.org, <https://www.iapmostandards.org>

Reaffirmation

ANSI/CSA B45.11/IAPMO Z401-2017 (R2021), Glass plumbing fixtures (reaffirmation of ANSI/CSA B45.11/IAPMO Z401-2017) Final Action Date: 10/28/2021

IES (Illuminating Engineering Society)

120 Wall Street, Floor 17, New York, NY 10005-4001 | pmcgillicuddy@ies.org, www.ies.org

New Standard

ANSI/IES LP-13-2021, Lighting Practice: Introduction to Resilient Lighting (new standard) Final Action Date: 11/2/2021

New Standard

ANSI/IES TM-38-2021, Technical Memorandum for Recommendations for Measuring Tunable White Solid-State Lighting Products (new standard) Final Action Date: 11/2/2021

Revision

ANSI-IES LS-1-2021, Lighting Science: Nomenclature and Definitions for Illuminating Engineering (revision of ANSI/IES LS 1-2020) Final Action Date: 11/2/2021

NEMA (ASC C136) (National Electrical Manufacturers Association)

1300 North 17th Street, Suite 900, Rosslyn, VA 22209 | David.Richmond@nema.org, www.nema.org

Revision

ANSI C136.49-2021, Roadway and Area Lighting Equipment - Plasma Lighting (revision of ANSI C136.49-2016) Final Action Date: 10/26/2021

NFPA (National Fire Protection Association)

One Batterymarch Park, Quincy, MA 02169 | dbellis@nfpa.org, www.nfpa.org

Revision

ANSI/NFPA 18A-2022, Standard on Water Additives for Fire Control and Vapor Mitigation (revision of ANSI/NFPA 18A-2017) Final Action Date: 10/22/2021

Revision

ANSI/NFPA 268-2022, Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source (revision of ANSI/NFPA 268-2017) Final Action Date: 10/22/2021

Revision

ANSI/NFPA 269-2022, Standard Test Method for Developing Toxic Potency Data for Use in Fire Hazard Modeling (revision of ANSI/NFPA 269-2017) Final Action Date: 10/22/2021

Revision

ANSI/NFPA 275-2022, Standard Method of Fire Tests for the Evaluation of Thermal Barriers (revision of ANSI/NFPA 275-2017) Final Action Date: 10/22/2021

Revision

ANSI/NFPA 287-2022, Standard Test Methods for Measurement of Flammability of Materials in Cleanrooms Using a Fire Propagation Apparatus (FPA) (revision of ANSI/NFPA 287-2017) Final Action Date: 10/22/2021

Revision

ANSI/NFPA 385-2022, Standard for Tank Vehicles for Flammable and Combustible Liquids (revision of ANSI/NFPA 385-2017) Final Action Date: 10/22/2021

Revision

ANSI/NFPA 409-2022, Standard on Aircraft Hangars (revision of ANSI/NFPA 409-2016) Final Action Date: 10/22/2021

Revision

ANSI/NFPA 415-2022, Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways (revision of ANSI/NFPA 415-2016) Final Action Date: 10/22/2021

Revision

ANSI/NFPA 423-2022, Standard for Construction and Protection of Aircraft Engine Test Facilities (revision of ANSI/NFPA 423-2016) Final Action Date: 10/22/2021

NFRC (National Fenestration Rating Council)

6305 Ivy Lane, Suite 140, Greenbelt, MD 20770 | jpadgett@nfr.org, www.nfrc.org

Revision

ANSI/NFRC 100-2020 EA01, Procedure for Determining Fenestration Product U-factors (revision of ANSI/NFRC 100-2020 E0A0) Final Action Date: 10/28/2021

Revision

ANSI/NFRC 200-2020 EA01, Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence (revision of ANSI/NFRC 200-2020 E0A0) Final Action Date: 10/28/2021

Revision

ANSI/NFRC 202-2020 EA01, Procedure for Determining Translucent Fenestration Product Visible Transmittance at Normal Incidence (revision of ANSI/NFRC 202-2020) Final Action Date: 10/28/2021

NFRC (National Fenestration Rating Council)

6305 Ivy Lane, Suite 140, Greenbelt, MD 20770 | jpadgett@nfr.org, www.nfrc.org

Revision

ANSI/NFRC 203-2020 EA01, Procedure for Determining Visible Transmittance of Tubular Daylighting Devices (revision of ANSI/NFRC 203-2020) Final Action Date: 10/28/2021

Revision

ANSI/NFRC 400-2020 EA01, Procedure for Determining Fenestration Product Air Leakage (revision of ANSI/NFRC 400-2020) Final Action Date: 10/28/2021

Revision

ANSI/NFRC 500-2020 EA01, Procedure for Determining Fenestration Product Condensation Index Ratings (revision of ANSI/NFRC 500-2020) Final Action Date: 10/28/2021

NSF (NSF International)

789 N. Dixboro Road, Ann Arbor, MI 48105-9723 | arose@nsf.org, www.nsf.org

Revision

ANSI/NSF 7-2021 (i25r2), Commercial Refrigerators and Freezers (revision of ANSI/NSF 7-2019) Final Action Date: 10/24/2021

Revision

ANSI/NSF 14-2021 (i114r1), Plastics Piping System Components and Related Materials (revision of ANSI/NSF 14-2020) Final Action Date: 10/26/2021

Revision

ANSI/NSF 42-2021 (i115r2), Drinking Water Treatment Units - Aesthetic Effects (revision of ANSI/NSF 42-2020) Final Action Date: 10/31/2021

Revision

ANSI/NSF 53-2021 (i138r1), Drinking Water Treatment Units - Health Effects (revision of ANSI/NSF 53-2020) Final Action Date: 10/4/2021

Revision

ANSI/NSF 55-2021 (i59r1), Ultraviolet Microbiological Water Treatment Systems (revision of ANSI/NSF 55-2021) Final Action Date: 10/25/2021

Revision

ANSI/NSF 55-2021 (i60r1), Ultraviolet Microbiological Water Treatment Systems (revision of ANSI/NSF 55-2020) Final Action Date: 10/27/2021

SCTE (Society of Cable Telecommunications Engineers)

140 Philips Rd, Exton, PA 19341 | kcooney@scte.org, www.scte.org

New Standard

ANSI/SCTE 272-2021, Standardized Loading for Reverse-Path Bit Error Ratio Testing (new standard) Final Action Date: 11/2/2021

New Standard

ANSI/SCTE 273-1-2021, Generic Access Platform Enclosure Specification (new standard) Final Action Date: 11/2/2021

New Standard

ANSI/SCTE 273-2-2021, Generic Access Platform (GAP) Modules Specification (new standard) Final Action Date: 11/2/2021

SCTE (Society of Cable Telecommunications Engineers)

140 Philips Rd, Exton, PA 19341 | kcooney@scte.org, www.scte.org

Reaffirmation

ANSI/SCTE 37-2017 (R2021), Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-ROOTS Management Information Base (MIB) - Definition (reaffirmation of ANSI/SCTE 37-2017) Final Action Date: 11/2/2021

SPRI (Single Ply Roofing Industry)

465 Waverley Oaks Road, Suite 421, Waltham, MA 02452 | info@spri.org, www.spri.org

Revision

ANSI/SPRI FX-1-2021, Standard Field Test Procedure for Determining the Withdrawal Resistance of Roofing Fasteners (revision of ANSI/SPRI FX-1-2016) Final Action Date: 11/1/2021

TAPPI (Technical Association of the Pulp and Paper Industry)

15 Technology Parkway South, Suite 115, Peachtree Corners, GA 30092 | standards@tappi.org, www.tappi.org

New Standard

ANSI/TAPPI T 220 sp-2021, Physical testing of pulp handsheets (new standard) Final Action Date: 10/26/2021

New Standard

ANSI/TAPPI T 222 om-2021, Acid insoluble lignin in wood and pulp (new standard) Final Action Date: 11/1/2021

New Standard

ANSI/TAPPI T 227 om-2021, Freeness of pulp (Canadian standard method) (new standard) Final Action Date: 10/26/2021

New Standard

ANSI/TAPPI T 278 sp-2021, Pulp screening (Valley-type screening device) (new standard) Final Action Date: 10/26/2021

New Standard

ANSI/TAPPI T 448 om-2021, Water vapor transmission rate of paper and paperboard at 23 degrees C and 50% RH (new standard) Final Action Date: 11/2/2021

New Standard

ANSI/TAPPI T 460 om-2021, Air resistance of paper (Gurley method) (new standard) Final Action Date: 11/1/2021

New Standard

ANSI/TAPPI T 465 sp-2021, Static creasing of paper for water vapor transmission tests (new standard) Final Action Date: 11/1/2021

New Standard

ANSI/TAPPI T 541 om-2021, Internal bond strength of paperboard (z-direction tensile) (new standard) Final Action Date: 11/2/2021

New Standard

ANSI/TAPPI T 564 sp-2021^{2x}, Transparent chart for the estimation of defect size (new standard) Final Action Date: 11/2/2021

New Standard

ANSI/TAPPI T 566 om-2021, Bending resistance (stiffness) of paper (Taber-type tester in 0 to 10 Taber stiffness unit configuration) (new standard) Final Action Date: 11/2/2021

Reaffirmation

ANSI/TAPPI T 200 sp-2015 (R2021), Laboratory beating of pulp (Valley beater method) (reaffirmation of ANSI/TAPPI T 200 sp-2015) Final Action Date: 10/26/2021

TAPPI (Technical Association of the Pulp and Paper Industry)

15 Technology Parkway South, Suite 115, Peachtree Corners, GA 30092 | standards@tappi.org, www.tappi.org

Reaffirmation

ANSI/TAPPI T 213 om-2010 (R2021), Dirt in pulp - Chart method (reaffirmation of ANSI/TAPPI T 213 om-2010 (R2015))
Final Action Date: 10/26/2021

Reaffirmation

ANSI/TAPPI T 248 sp-2015 (R2021), Laboratory beating of pulp (PFI mill method) (reaffirmation of ANSI/TAPPI T 248 sp-2015) Final Action Date: 10/26/2021

Reaffirmation

ANSI/TAPPI T 277 sp-2014 (R2021), Macro stickies content in pulp: The pick-up method (reaffirmation of ANSI/TAPPI T 277 sp-2014) Final Action Date: 11/1/2021

Reaffirmation

ANSI/TAPPI T 411 om-2015 (R2021), Thickness (caliper) of paper, paperboard, and combined board (reaffirmation of ANSI/TAPPI T 411 om-2015) Final Action Date: 10/26/2021

Reaffirmation

ANSI/TAPPI T 572 sp-2013 (R2021), Accelerated pollutant aging of printing and writing paper by pollution chamber exposure apparatus (reaffirmation of ANSI/TAPPI T 572 sp-2013) Final Action Date: 11/2/2021

Revision

ANSI/TAPPI T 425 om-2021, Opacity of paper (15/d geometry, illuminant A/2°, 89% reflectance backing and paper backing) (revision of ANSI/TAPPI T 425 om-2011) Final Action Date: 10/26/2021

Revision

ANSI/TAPPI T 428 om-2021, Hot water extractable acidity or alkalinity of paper (revision of ANSI/TAPPI T 428 om-2013) Final Action Date: 11/1/2021

Revision

ANSI/TAPPI T 444 sp-2021, Silver tarnishing by paper and paperboard (revision and redesignation of ANSI/TAPPI T 444 om-2012) Final Action Date: 11/1/2021

Revision

ANSI/TAPPI T 459 om-2021, Surface strength of paper (wax pick test) (revision of ANSI/TAPPI T 459 om-2013) Final Action Date: 11/1/2021

Revision

ANSI/TAPPI T 476 om-2021, Abrasion loss of paper and paperboard (Taber-type method) (revision of ANSI/TAPPI T 476 om-2011) Final Action Date: 11/2/2021

UL (Underwriters Laboratories)

12 Laboratory Drive, Research Triangle Park, NC 27709-3995 | Vickie.T.Hinton@ul.org, https://ul.org/

National Adoption

ANSI/UL 60079-33-2021a, Standard for Safety for Explosive Atmospheres - Part 33: Equipment Protection by Special Protections (national adoption of IEC 60079-33 with modifications and revision of ANSI/UL 60079-33-2021) Final Action Date: 10/21/2021

National Adoption

ANSI/UL 60730-1-2021, Standard for Automatic Electrical Controls - Part 1: General Requirements (identical national adoption of IEC 60730-1 and revision of ANSI/UL 60730-1-2016) Final Action Date: 10/18/2021

UL (Underwriters Laboratories)

12 Laboratory Drive, Research Triangle Park, NC 27709-3995 | Julio.Morales@UL.org, <https://ul.org/>

National Adoption

ANSI/UL 62368-1-2021, Standard for Safety for Audio/Video, Information and Communication Technology Equipment - Part 1: Safety Requirements (identical national adoption of IEC 62368-1 and revision of ANSI/UL 62368-1-2019) Final Action Date: 10/22/2021

Reaffirmation

ANSI/UL 1517-2012 (R2021), Standard for Hybrid Personal Flotation Devices (September 3, 2021) (reaffirmation of ANSI/UL 1517-2012 (R2017)) Final Action Date: 10/28/2021

Reaffirmation

ANSI/UL 2748A-2017 (R2021), Standard for Safety for Arcing Fault Interrupting Devices (reaffirmation of ANSI/UL 2748A-2017) Final Action Date: 10/28/2021

Revision

ANSI/UL 25-2021, Standard for Safety for Meters for Flammable and Combustible Liquids and LP-Gas (revision of ANSI/UL 25-2016) Final Action Date: 10/27/2021

Revision

ANSI/UL 498A-2021a, Standard for Safety for Current Taps and Adapters (revision of ANSI/UL 498A-2021) Final Action Date: 10/27/2021

Revision

ANSI/UL 588-2021a, Standard for Safety for Seasonal and Holiday Decorative Products (September 10, 2021) (revision of ANSI/UL 588-2021) Final Action Date: 10/27/2021

Revision

ANSI/UL 1839-2021, Standard for Safety for Automotive Battery Booster Cables (revision of ANSI/UL 1839-2020) Final Action Date: 10/26/2021

Revision

ANSI/UL 7001-2021, Standard for Sustainability for Household Refrigeration Appliances (revision of ANSI/UL 7001-2014) Final Action Date: 10/27/2021

Call for Members (ANS Consensus Bodies)

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

ABYC (American Boat and Yacht Council)

613 Third Street, Suite 10, Annapolis, MD 21403 | smoulton@abycinc.org, www.abycinc.org
Sara Moulton; smoulton@abycinc.org

BSR/ABYC H-8-202x, Buoyancy in the Event of Flooding/Swamping (revision of ANSI/ABYC H-8-2017)

Seeking consensus body members who identify as specialist service to the marine industry.

BSR/ABYC P-21-202x, Manual Hydraulic Steering Systems (revision of ANSI/ABYC P-21-2017)

Seeking consensus body members who identify as insurance/survey.

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

180 Technology Parkway, Peachtree Corners, GA 30092 | tmlisle@ashrae.org, www.ashrae.org
Tanisha Meyers-Lisle; tmlisle@ashrae.org

BSR/ASHRAE STANDARD 204-202x, Method of Test for Rating Micro Combined Heat and Power Devices (revision of ANSI/ASHRAE STANDARD 204-2020)

BSR/ASHRAE/ACCA STANDARD 180-202x, Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems (revision of ANSI/ASHRAE/ACCA STANDARD 180-2018)

ASME (American Society of Mechanical Engineers)

Two Park Avenue, 6th Floor, New York, NY 10016-5990 | ansibox@asme.org, www.asme.org
Maria Acevedo; ansibox@asme.org

BSR/ASME B16.21-202x, Nonmetallic Flat Gaskets for Pipe Flanges (revision of ANSI/ASME B16.21-2016)

ASNT (American Society for Nondestructive Testing)

1711 Arlingate Lane, Columbus, OH 43228 | bfrye@asnt.org, www.asnt.org
Brian Frye; bfrye@asnt.org

BSR/ASNT CP-106-202x, Nondestructive Testing - Qualification and Certification of Personnel (identical national adoption of ISO 9712:2012 and revision of ANSI/ASNT CP-106 (ISO 9712-2012)-2018)

ECIA (Electronic Components Industry Association)

13873 Park Center Road, Suite 315, Herndon, VA 20171 | ldonohoe@ecianow.org, www.ecianow.org
Laura Donohoe; ldonohoe@ecianow.org

BSR/EIA 198-3-10-2015 (R202x), Multilayer (Monolithic), Unencapsulated, Ceramic Dielectric, Surface-Mount Low-Induction Chip Capacitors and Multi-Terminal Low-Induction Capacitors (reaffirmation of ANSI/EIA 198-3-10-2015)

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

700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org
Deborah Spittle; comments@standards.incits.org

INCITS/ISO/IEC 14776-224:2019 [202x], Information Technology - Small Computer System Interface (SCSI) - Part 224: Fibre Channel Protocol For SCSI, Fourth Version (FCP-4) (identical national adoption of ISO/IEC 14776-224:2019)

INCITS/ISO/IEC 14776-232:2001 [202x], Information Technology - Small Computer System Interface (SCSI) - Part 232: Serial Bus Protocol-2 (SBP-2) (identical national adoption of ISO/IEC 14776-232:2001)

INCITS/ISO/IEC 14776-415:2019 [202x], Information Technology - Small Computer System Interface (SCSI) - Part 415: SCSI Architecture Model - 5 (SAM-5) (identical national adoption of ISO/IEC 14776-415:2019)

INCITS/ISO/IEC 14776-481:2019 [202x], Information Technology - Small Computer System Interface (SCSI) - Part 481: Security Features for SCSI Commands (SFSC) (identical national adoption of ISO/IEC 14776-481:2019)

INCITS/ISO/IEC 23001-9:2016 [202x], Information technology - MPEG systems technologies - Part 9: Common encryption of MPEG-2 transport streams (identical national adoption of ISO/IEC 23001-9:2016)

INCITS/ISO/IEC 23001-1:2006/COR1:2007 [202x], Information technology - MPEG systems technologies - Part 1: Binary MPEG format for XML - Technical Corrigendum 1 (identical national adoption of ISO/IEC 23001-1:2006/COR1:2007)

INCITS/ISO/IEC 23001-1:2006/COR2:2007 [202x], Information technology - MPEG systems technologies - Part 1: Binary MPEG format for XML - Technical Corrigendum 2 (identical national adoption of ISO/IEC 23001-1:2006/COR2:2007)

INCITS/ISO/IEC 23008-2:2020/AM1:2021 [202x], Information technology - High efficiency coding and media delivery in heterogeneous environments - Part 2: High-efficiency video coding - Amendment 1: Shutter interval information SEI message (identical national adoption of ISO/IEC 23008-2:2020/AM1:2021)

INCITS/ISO/IEC 27033-6:2016 [202x], Information technology - Security techniques - Network security - Part 6: Securing wireless IP network access (identical national adoption of ISO/IEC 27033-6:2016)

INCITS/ISO/IEC 30134-1:2016 [202x], Information technology - Data centres - Key performance indicators - Part 1: Overview and general requirements (identical national adoption of ISO/IEC 30134-1:2016)

INCITS/ISO/IEC 30134-2:2016 [202x], Information technology - Data centres - Key performance indicators - Part 2: Power usage effectiveness (PUE) (identical national adoption of ISO/IEC 30134-2:2016)

INCITS/ISO/IEC 30134-3:2016 [202x], Information technology - Data centres - Key performance indicators - Part 3: Renewable energy factor (REF) (identical national adoption of ISO/IEC 30134-3:2016)

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

700 K Street NW, Suite 600, Washington, DC 20001 | comments@standards.incits.org, www.incits.org

INCITS/ISO/IEC 30134-1:2016/AM1:2018 [202x], Information technology - Data centres - Key performance indicators - Part 1: Overview and general requirements - Amendment 1 (identical national adoption of ISO/IEC 30134-1:2015/AM1:2018)

INCITS/ISO/IEC 30134-2:2016/AM1:2018 [202x], Information technology - Data centres - Key performance indicators - Part 2: Power usage effectiveness (PUE) - Amendment 1 (identical national adoption of ISO/IEC 30134-2:2016/AM1:2018)

INCITS/ISO/IEC 30134-3:2016/AM1:2018 [202x], Information technology - Data centres - Key performance indicators - Part 3: Renewable energy factor (REF) - Amendment 1 (identical national adoption of ISO/IEC 30134-3:2016/AM1:2018)

INCITS/ISO/IEC 23544:2021 [202x], Information Technology - Data centres - Application Platform Energy Effectiveness (APEE) (identical national adoption of ISO/IEC 23544:2021)

INCITS/ISO/IEC 29151:2017 [202x], Information Technology - Security Techniques - Code of Practice for Personally Identifiable Information Protection (identical national adoption of ISO/IEC 29151:2017)

LIA (ASC Z136) (Laser Institute of America)

12001 Research Parkway, Suite 210, Orlando, FL 32828 | lcaldero@lia.org, www.laserinstitute.org
Liliana Caldero; lcaldero@lia.org

BSR Z136.4-202x, Recommended Practice for Laser Safety Measurements for Classification and Hazard Evaluation (revision of ANSI Z136.4-2021)

NECA (National Electrical Contractors Association)

1201 Pennsylvania Avenue, Suite 1200, Washington, DC 20004 | Aga.golriz@necanet.org, www.neca-neis.org
Aga Golriz; Aga.golriz@necanet.org

BSR/NECA LPI 781-202x, Recommended Practice for Installing and Maintaining Lightning Protection Systems (new standard)

NENA (National Emergency Number Association)

1700 Diagonal Road, Suite 500, Alexandria, VA 22314 | darnold@nena.org, www.nena.org
Delaine Arnold; darnold@nena.org

BSR/NENA STA.021.2-202x, NENA Standard for Emergency Incident Data Object (EIDO) (revision and redesignation of ANSI/NENA STA.021.1-2021)

SCTE (Society of Cable Telecommunications Engineers)

140 Philips Rd, Exton, PA 19341 | kcooney@scte.org, www.scte.org
Kim Cooney; kcooney@scte.org

BSR/SCTE 56-2016 (R202x), Digital Multiprogram Distribution by Satellite (reaffirmation of ANSI/SCTE 56-2016)

BSR/SCTE 63-202x, Test Method for Voltage/Spark Test of Outer Jacket (revision of ANSI/SCTE 63-2015)

BSR/SCTE 65-2016 (R202x), Service Information Delivered Out-Of-Band for Digital Cable Television (reaffirmation of ANSI/SCTE 65-2016)

SCTE (Society of Cable Telecommunications Engineers)

140 Philips Rd, Exton, PA 19341 | kcooney@scte.org, www.scte.org

BSR/SCTE 165-2-2016 (R202x), IPCablecom 1.5 - Part 2: Audio/Video Codecs (reaffirmation of ANSI/SCTE 165-2-2016)

BSR/SCTE 165-3-2016 (R202x), IPCablecom 1.5 - Part 3: Network-Based Call Signaling Protocol (reaffirmation of ANSI/SCTE 165-3-2016)

BSR/SCTE 165-12-2016 (R202x), IPCablecom 1.5 - Part 12: PSTN Gateway Call Signaling Protocol (reaffirmation of ANSI/SCTE 165-12-2016)

BSR/SCTE 165-18-2016 (R202x), IPCablecom 1.5 - Part 18: CMS-to-CMS Signaling (reaffirmation of ANSI/SCTE 165-18-2016)

BSR/SCTE 165-21-2016 (R202x), IPCablecom 1.5 - Part 21: Signaling Extension MIB (reaffirmation of ANSI/SCTE 165-21-2016)

BSR/SCTE 173-1-2017 (R202x), Requirements for Preferential Telecommunications over IPCablecom Networks (reaffirmation of ANSI/SCTE 173-1-2017)

BSR/SCTE 173-2-2017 (R202x), Framework for Implementing Preferential Telecommunications in IPCablecom and IPCablecom2 Networks (reaffirmation of ANSI/SCTE 173-2-2017)

BSR/SCTE 173-3-2017 (R202x), Specification for Authentication in Preferential Telecommunications over IPCablecom2 Networks (reaffirmation of ANSI/SCTE 173-3-2017)

BSR/SCTE 173-4-2017 (R202x), Specification for Priority in Preferential Telecommunications over IPCablecom2 Networks (reaffirmation of ANSI/SCTE 173-4-2017)

Call for Members (ANS Consensus Bodies)

ANSI Accredited Standards Developer

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

ANSI Accredited Standards Developer

SCTE (Society of Cable Telecommunications Engineers)

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 ANS consensus bodies and is interested in new members in all membership categories to participate in new work in fiber-optic networks, advanced advertising, 3D television, and other important topics. Of particular interest is membership from the content (program and advertising) provider and user communities. Membership in the SCTE Standards Program is open to all directly and materially affected parties as defined in SCTE's membership rules and operating procedures. More information is available at www.scte.org or by e-mail from standards@scte.org.

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

Meeting Notices (Standards Developers)

ANSI Accredited Standards Developer

NW&RA (ASC Z245) - National Waste & Recycling Association Equipment Technology & Operations for Wastes & Recyclable Materials

Next Meeting postponed until November 9, 2021

Due to a number of unanticipated scheduling issues, the ANS Z245 Committee on Equipment Technology and Operations for Waste and Recyclable Materials will be postponed until November 9th at 2pm est. Below is the revised announcement.

The National Waste and Recycling Association (NW&RA) serves at the secretariat for the ANS Z245 Committee on Equipment Technology and Operations for Waste and Recyclable Materials. The next meeting will be November 9th at 2:00 pm eastern for the Z245 Committee. The meeting will be virtual. Those interested in participating can contact Kirk Sander at ksander@wasterecycling.org.

American National Standards (ANS) Process

Please visit ANSI's website (www.ansi.org) for resources that will help you to understand, administer and participate in the American National Standards (ANS) process. Documents posted at these links are updated periodically as new documents and guidance are developed, whenever ANS-related procedures are revised, and routinely with respect to lists of proposed and approved ANS. The main ANS-related link is www.ansi.org/asd and here are some direct links as well as highlights of information that is available:

Where to find Procedures, Guidance, Interpretations and More...

Please visit ANSI's website (www.ansi.org)

- ANSI Essential Requirements: Due process requirements for American National Standards (always current edition): www.ansi.org/essentialrequirements
- ANSI Standards Action (weekly public review announcements of proposed ANS and standards developer accreditation applications, listing of recently approved ANS, and proposed revisions to ANS-related procedures): www.ansi.org/standardsaction
- Accreditation information – for potential developers of American National Standards (ANS): www.ansi.org/sdoaccreditation
- ANS Procedures, ExSC Interpretations and Guidance (including a slide deck on how to participate in the ANS process and the BSR-9 form): www.ansi.org/asd
- Lists of ANSI-Accredited Standards Developers (ASDs), Proposed ANS and Approved ANS: www.ansi.org/asd
- American National Standards Key Steps: www.ansi.org/anskeysteps
- American National Standards Value: www.ansi.org/ansvalue
- ANS Web Forms for ANSI-Accredited Standards Developers - PINS, BSR8|108, BSR11, Technical Report: <https://www.ansi.org/portal/psawebforms/>
- Information about standards Incorporated by Reference (IBR): <https://ibr.ansi.org/>
- ANSI - Education and Training: www.standardstolearn.org

American National Standards 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.

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- AAMI (Association for the Advancement of Medical Instrumentation)
 - AARST (American Association of Radon Scientists and Technologists)
 - AGA (American Gas Association)
 - AGSC (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)
 - Home Innovation (Home Innovation Research Labs)
 - IES (Illuminating Engineering Society)
 - ITI (InterNational Committee for Information Technology Standards)
 - MHI (Material Handling Industry)
 - 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)

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 “American National Standards Maintained Under Continuous Maintenance.” Questions? psa@ansi.org.

ANSI-Accredited Standards Developers (ASD) Contacts

The addresses listed in this section are to be used in conjunction with standards listed in PINS, Call for Comment, Call for Members 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 the PSA Department at psa@ansi.org.

AAFS

American Academy of Forensic Sciences
410 North 21st Street
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Teresa Ambrosius
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AAMI

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Medical Instrumentation
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ABYC

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Sara Moulton
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AGMA

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1001 N Fairfax Street, 5th Floor
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www.agma.org

Amir Aboutaleb
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APCO

Association of Public-Safety
Communications Officials-International
351 N. Williamson Boulevard
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Mindy Adams
apcostandards@apcointl.org

ASHRAE

American Society of Heating, Refrigerating
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ISO Draft International Standards

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

COMMENTS

Comments regarding ISO documents should be sent to 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. The final date for offering comments is listed after each draft.

ORDERING INSTRUCTIONS

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

Ageing societies (TC 314)

ISO/FDIS 25552, Ageing societies - Framework for dementia-inclusive communities - 11/2/2010, \$112.00

Aircraft and space vehicles (TC 20)

ISO/FDIS 16457, Space environment (natural and artificial) - The Earth's ionosphere model - International reference ionosphere (IRI) model and extensions to the plasmasphere - 11/5/2011, \$77.00

ISO/DIS 5015-2, Unmanned aircraft systems - Part 2: Operation of vertiports for unmanned aircraft (UA) - 11/11/2025, \$82.00

Building construction (TC 59)

ISO/DIS 7817, Building information modelling - Level of information need - Concepts and principles - 11/11/2026, \$77.00

ISO/FDIS 22058, Construction procurement - Guidance on strategy and tactics - 11/3/2002, \$98.00

Essential oils (TC 54)

ISO/FDIS 22769, Essential oil of Australian sandalwood [Santalum spicatum (R.Br.) A.DC.] - 11/12/2009, \$46.00

Fire safety (TC 92)

ISO/FDIS 26367-3, Guidelines for assessing the adverse environmental impact of fire effluents - Part 3: Sampling and analysis - 11/3/2000, \$77.00

Floor coverings (TC 219)

ISO/DIS 24335, Laminate floor coverings - Determination of impact resistance - 11/11/2025, \$58.00

Industrial trucks (TC 110)

ISO/DIS 5057, Industrial trucks - Inspection and repair of fork arms in service on fork-lift trucks - 11/11/2028, \$46.00

ISO/DIS 13284, Industrial trucks - Fork arm extensions and telescopic fork arms - Technical characteristics and strength requirements - 11/11/2025, \$46.00

Iron ores (TC 102)

ISO/DIS 21826-1, Iron ores - Determination of total iron content - EDTA photometric titration method - Part 1: Microwave digestion method - 11/4/2013, \$93.00

Materials, equipment and offshore structures for petroleum and natural gas industries (TC 67)

ISO/DIS 12736-3, Petroleum and natural gas industries - Wet thermal insulation systems for pipelines and subsea equipment - Part 3: Interfaces between systems, field joint system, field repairs and prefabricated insulation - 11/4/2013, \$125.00

Microbeam analysis (TC 202)

ISO/FDIS 23703, Microbeam analysis - Guideline for misorientation analysis to assess mechanical damage of austenitic stainless steel by electron backscatter diffraction (EBSD) - 11/5/2023, \$88.00

Other

ISO/CIE DIS 11664-2.2, Colorimetry - Part 2: CIE standard illuminants - 11/11/2026, \$71.00

Plain bearings (TC 123)

ISO/DIS 3548-3, Plain bearings - Thin-walled half bearings with or without flange - Part 3: Measurement of peripheral length - 11/11/2026, \$107.00

Plastics (TC 61)

ISO/FDIS 15013, Plastics - Extruded sheets of polypropylene (PP) - Requirements and test methods - 11/4/2028, \$53.00

ISO/FDIS 15527, Plastics - Compression-moulded sheets of polyethylene (PE-UHMW, PE-HD) - Requirements and test methods - 11/4/2028, \$58.00

ISO/DIS 11359-1, Plastics - Thermomechanical analysis (TMA) - Part 1: General principles - 11/4/2017, \$46.00

ISO/DIS 20819-2, Plastics - Wood-plastic recycled composites (WPRC) - Part 2: Test methods - 11/4/2017, \$82.00

Plastics pipes, fittings and valves for the transport of fluids (TC 138)

ISO/DIS 4437-4, Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE) - Part 4: Valves - 11/11/2028, \$77.00

Prosthetics and orthotics (TC 168)

ISO/DIS 22675, Prosthetics - Testing of ankle-foot devices and foot units - Requirements and test methods - 11/4/2016, \$155.00

Risk management (TC 262)

ISO/FDIS 31073, Risk management - Vocabulary - 11/6/2009, \$53.00

Road vehicles (TC 22)

ISO/DIS 3779, Road vehicles - Vehicle identification number (VIN) - Content and structure - 11/11/2026, \$46.00

ISO/DIS 3780, Road vehicles - World manufacturer identifier (WMI) code - 11/11/2025, \$40.00

ISO/DIS 1726-3, Road vehicles - Mechanical couplings between tractors and semi-trailers - Part 3: Requirements for semi-trailer contact area to fifth wheel - 11/4/2017, \$46.00

ISO/DIS 20766-8, Road vehicles - Liquefied petroleum gas (LPG) fuel system components - Part 8: Fuel pump - 11/12/2027, \$33.00

ISO/DIS 20766-17, Road vehicles - Liquefied petroleum gas (LPG) fuel system components - Part 17: Gas dosage unit - 11/12/2027, \$33.00

ISO/DIS 20766-21, Road vehicles - Liquefied petroleum gas (LPG) fuel system components - Part 21: Pressure and/or temperature sensors - 11/12/2027, \$33.00

Rolling bearings (TC 4)

ISO/DIS 22872, Rolling bearings - Geometrical product specifications (GPS) - Symbols, terms and definitions associated with GPS - 11/11/2025, \$134.00

Rubber and rubber products (TC 45)

ISO/FDIS 21490, Rubber and rubber products - Determination of 2-mercaptobenzothiazole content by high performance liquid chromatography (HPLC) - 11/8/2014, \$58.00

Security (TC 292)

ISO/DIS 22361, Security and resilience - Crisis management - Guidelines for a strategic capability - 11/12/2000, \$107.00

Ships and marine technology (TC 8)

ISO/FDIS 24169, Ships and marine technology - Fireproof watertight hatch covers - 11/4/2010, \$46.00

Steel (TC 17)

ISO/DIS 4943, Steel and cast iron - Determination of copper content - Flame atomic absorption spectrometric method - 11/11/2026, \$67.00

Steel wire ropes (TC 105)

ISO/DIS 2232, Round non-alloy steel wires for general purpose wire ropes, large diameter wire ropes and mine hoisting wire ropes - Specifications - 11/12/2000, \$77.00

ISO/DIS 4344, Steel wire ropes for lifts - Minimum requirements - 11/11/2025, \$102.00

Technical drawings, product definition and related documentation (TC 10)

ISO/FDIS 9177-3, Mechanical pencils for technical drawings - Part 3: Black leads - Bending strengths of HB leads -, \$33.00

Textiles (TC 38)

ISO/DIS 14389, Textiles - Determination of the phthalate content - Tetrahydrofuran method - 11/12/2027, \$82.00

ISO/DIS 4484-1, Textiles and textile products - Microplastics from textile sources - Part 1: Determination of material loss from fabrics during washing - 11/11/2028, \$53.00

ISO/DIS 4484-3, Textiles and textile products - Microplastics from textile sources - Part 3: Measurement of collected material mass released from textile end products by domestic washing method - 11/4/2017, \$88.00

Tractors and machinery for agriculture and forestry (TC 23)

ISO/DIS 11684, Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Safety signs and hazard pictorials - General principles - 11/12/2027, \$125.00

ISO/DIS 23316-1, Tractors and machinery for agriculture and forestry - Electrical high-power interface 700 V DC / 480 V AC - Part 1: General - 11/4/2017, \$62.00

Traditional Chinese medicine (TC 249)

ISO/FDIS 23956, Traditional Chinese medicine - Determination of benzopyrene in processed natural products - 11/5/2012, \$53.00

Transfusion, infusion and injection equipment for medical use (TC 76)

ISO/DIS 24072, Aerosol bacterial retention test method for air-inlet on administration devices - 11/4/2017, \$46.00

Transport information and control systems (TC 204)

ISO/DIS 14827-2, Intelligent transport systems - Data interfaces between centres for transport information and control systems - Part 2: AP-DATEX - 11/4/2017, \$146.00

ISO/IEC JTC 1, Information Technology

ISO/IEC DIS 26563, Software and systems engineering - Methods and tools for product line configuration management - 11/4/2017, \$102.00

ISO/IEC DIS 29168-2, Information technology - Open systems interconnection - Part 2: Procedures for the object identifier resolution system operational agency - 11/11/2026, \$53.00

ISO/IEC DIS 30107-3, Information technology - Biometric presentation attack detection - Part 3: Testing and reporting - 11/12/2027, \$107.00

ISO/IEC/IEEE DIS 24641, Systems and Software engineering - Methods and tools for model-based systems and software engineering - 11/4/2017, \$155.00



Newly Published ISO & IEC Standards

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

ISO Standards

Concrete, reinforced concrete and pre-stressed concrete (TC 71)

[ISO 21725-1:2021](#), Simplified design of prestressed concrete bridges - Part 1: I-girder bridges, \$250.00

[ISO 21725-2:2021](#), Simplified design of prestressed concrete bridges - Part 2: Box-girder bridges, \$250.00

Control and safety devices for non industrial gas-fired appliances and systems (TC 161)

[ISO 23551-6:2021](#), Safety and control devices for gas burners and gas-burning appliances - Particular requirements - Part 6: Thermoelectric flame supervision controls, \$149.00

Essential oils (TC 54)

[ISO 5093:2021](#), Essential oil of lemon myrtle (*Backhousia citriodora* F. Muell.), citral type, \$73.00

Fluid power systems (TC 131)

[ISO 12151-3:2021](#), Connections for hydraulic fluid power and general use - Hose fittings - Part 3: Hose fittings with ISO 6162-1 or ISO 6162-2 flange ends, \$73.00

Footwear (TC 216)

[ISO 16190:2021](#), Footwear - Critical substances potentially present in footwear and footwear components - Test method to quantitatively determine polycyclic aromatic hydrocarbons (PAHs) in footwear materials, \$73.00

Gas cylinders (TC 58)

[ISO 11439:2013/Amd 1:2021](#), Gas cylinders - High pressure cylinders for the on-board storage of natural gas as a fuel for automotive vehicles - Amendment 1, \$20.00

Glass in building (TC 160)

[ISO 18543:2021](#), Glass in building - Electrochromic glazings - Accelerated ageing test and requirements, \$111.00

[ISO 19916-3:2021](#), Glass in building - Vacuum insulating glass - Part 3: Test methods for evaluation of performance under temperature differences, \$149.00

Metallic and other inorganic coatings (TC 107)

[ISO 24449:2021](#), Metallic and other inorganic coatings - Determination of thermal conductivity of thermal barrier coatings at elevated temperature, \$73.00

Personal safety - Protective clothing and equipment (TC 94)

[ISO 20344:2021](#), Personal protective equipment - Test methods for footwear, \$250.00

Railway applications (TC 269)

[ISO 22752:2021](#), Railway applications - Bodyside windows for rolling stock, \$200.00

Rare earth (TC 298)

[ISO 23664:2021](#), Traceability of rare earths in the supply chain from mine to separated products, \$111.00

Road vehicles (TC 22)

[ISO 6469-3:2021](#), Electrically propelled road vehicles - Safety specifications - Part 3: Electrical safety, \$149.00

[ISO 21111-10:2021](#), Road vehicles - In-vehicle Ethernet - Part 10: Transport layer and network layer conformance test plans, \$250.00

Rolling bearings (TC 4)

[ISO 12297-1:2021](#), Rolling bearings - Cylindrical rollers - Part 1: Boundary dimensions, geometrical product specifications (GPS) and tolerance values for steel rollers, \$73.00

Rubber and rubber products (TC 45)

[ISO 25518:2021](#), Single-use rubber gloves for general applications - Specification, \$48.00

[ISO 27127:2021](#), Thermoplastic multi-layer (non-vulcanized) hoses and hose assemblies for the transfer of liquid petroleum gas and liquefied natural gas - Specification, \$149.00

Sustainable development in communities (TC 268)

[ISO 37106:2021](#), Sustainable cities and communities - Guidance on establishing smart city operating models for sustainable communities, \$225.00

Technical systems and aids for disabled or handicapped persons (TC 173)

[ISO 24669:2021](#), Water-absorbent polyacrylate in urine absorbing products - Requirements, \$48.00

Textiles (TC 38)

[ISO 2076:2021](#), Textiles - Man-made fibres - Generic names, \$149.00

[ISO 20932-1:2018/Amd 1:2021](#), Textiles - Determination of the elasticity of fabrics - Part 1: Strip tests - Amendment 1, \$20.00

Tractors and machinery for agriculture and forestry (TC 23)

[ISO 11738:2021](#), Agricultural irrigation equipment - Control heads, \$111.00

[ISO 8082-1:2009/Amd 1:2021](#), Self-propelled machinery for forestry - Laboratory tests and performance requirements for roll-over protective structures - Part 1: General machines - Amendment 1, \$20.00

ISO Technical Reports

Fine Bubble Technology (TC 281)

[ISO/TR 23016-3:2021](#), Fine bubble technology - Agricultural applications - Part 3: Guidelines for the minimum viable number concentration of ultrafine bubbles for promoting the germination of barley seeds, \$149.00

ISO/IEC JTC 1, Information Technology

[ISO/IEC 15444-4:2021](#), Information technology - JPEG 2000 image coding system - Part 4: Conformance Testing, \$200.00

[ISO/IEC 15444-5:2021](#), Information technology - JPEG 2000 image coding system - Part 5: Reference software, \$149.00

[ISO/IEC 19794-7:2021](#), Information technology - Biometric data interchange formats - Part 7: Signature/sign time series data, \$250.00

[ISO/IEC 22237-4:2021](#), Information technology - Data centre facilities and infrastructures - Part 4: Environmental control, \$149.00

[ISO/IEC 23094-2:2021](#), Information technology - General video coding - Part 2: Low complexity enhancement video coding, \$250.00

[ISO/IEC 28360-1:2021](#), Information technology - Determination of chemical emission rates from electronic equipment - Part 1: Using consumables, \$225.00

[ISO/IEC/IEEE 8802-1CM:2019/Amd 1:2021](#), Telecommunications and information exchange between information technology systems - Requirements for local and metropolitan area networks - Part 1CM: Time-sensitive networking for fronthaul - Amendment 1: Enhancements to fronthaul profiles to support new fronthaul interface, synchronization, and syntonization standards, \$73.00

[ISO/IEC/IEEE 8802-1Q:2020/Amd 31:2021](#), Telecommunications and exchange between information technology systems - Requirements for local and metropolitan area networks - Part 1Q: Bridges and bridged networks - Amendment 31: Stream Reservation Protocol (SRP) enhancements and performance improvements, \$149.00

[ISO/IEC/IEEE 8802-3:2021/Amd 4:2021](#), Telecommunications and exchange between information technology systems - Requirements for local and metropolitan area networks - Part 3: Standard for Ethernet - Amendment 4: Physical layers and management parameters for 50 Gb/s, 200 Gb/s, and 400 Gb/s operation over single-mode fiber, \$73.00

[ISO/IEC/IEEE 8802-3:2021/Amd 8:2021](#), Telecommunications and exchange between information technology systems - Requirements for local and metropolitan area networks - Part 3: Standard for Ethernet - Amendment 8: Physical layer specifications and management parameters for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s automotive electrical ethernet, \$149.00

[ISO/IEC/IEEE 8802-3:2021/Amd 6:2021](#), Telecommunications and exchange between information technology systems - Requirements for local and metropolitan area networks - Part 3: Standard for Ethernet - Amendment 6: Maintenance #13: Power over ethernet over 2 pairs, \$20.00

[ISO/IEC/IEEE 8802-3:2021/Amd 7:2021](#), Telecommunications and exchange between information technology systems - Requirements for local and metropolitan area networks - Part 3: Standard for Ethernet - Amendment 7: Physical layer and management parameters for 400 Gb/s over multimode fiber, \$73.00

[ISO/IEC/IEEE 29119-2:2021](#), Software and systems engineering - Software testing - Part 2: Test processes, \$225.00

[ISO/IEC/IEEE 29119-3:2021](#), Software and systems engineering - Software testing - Part 3: Test documentation, \$250.00

[ISO/IEC/IEEE 29119-4:2021](#), Software and systems engineering - Software testing - Part 4: Test techniques, \$250.00

IEC Standards

Safety of household and similar electrical appliances (TC 61)

[IEC 60335-2-44 Ed. 4.0 b:2021](#), Household and similar electrical appliances - Safety - Part 2-44: Particular requirements for ironers, \$183.00

[IEC 60335-2-47 Ed. 5.0 b:2021](#), Household and similar electrical appliances - Safety - Part 2-47: Particular requirements for commercial electric boiling pans, \$259.00

[IEC 60335-2-48 Ed. 5.0 b:2021](#), Household and similar electrical appliances - Safety - Part 2-48: Particular requirements for commercial electric grillers and toasters, \$221.00

[IEC 60335-2-49 Ed. 5.0 b:2021](#), Household and similar electrical appliances - Safety - Part 2-49: Particular requirements for commercial electric appliances for keeping food and crockery warm, \$259.00

[S+ IEC 60335-2-44 Ed. 4.0 en:2021 \(Redline version\)](#), Household and similar electrical appliances - Safety - Part 2-44: Particular requirements for ironers, \$239.00

[S+ IEC 60335-2-47 Ed. 5.0 en:2021 \(Redline version\)](#), Household and similar electrical appliances - Safety - Part 2-47: Particular requirements for commercial electric boiling pans, \$338.00

[S+ IEC 60335-2-48 Ed. 5.0 en:2021 \(Redline version\)](#), Household and similar electrical appliances - Safety - Part 2-48: Particular requirements for commercial electric grillers and toasters, \$288.00

[S+ IEC 60335-2-49 Ed. 5.0 en:2021 \(Redline version\)](#), Household and similar electrical appliances - Safety - Part 2-49: Particular requirements for commercial electric appliances for keeping food and crockery warm, \$338.00

Accreditation Announcements (U.S. TAGs to ISO)

Transfer of TAG Administrator – U.S. TAG to ISO

U.S. Technical Advisory Group (TAG) to ISO TC 82, Mining

Comment Deadline: November 22, 2021

The **U.S. Technical Advisory Group (TAG) to ISO TC 82, Mining**, has voted to approve the transfer of TAG Administrator responsibilities from CSA Group to the Association of Equipment Manufacturers (AEM). The TAG will operate under the *Model Operating Procedures for U.S. TAGs to ANSI for ISO Activities*, as contained in Annex A of the *ANSI International Procedures*. Please submit any comments on this action by **November 22, 2021** to: Ms. Valerie Lynch, Publication Manager, Association of Equipment Manufacturers, 6737 W. Washington Street, Suite 2400, Milwaukee, WI 53214; phone: 414.298.4747; email: vlynch@AEM.org (please copy jthomps@ansi.org). If no comments are received, this action will be formally approved on November 23, 2021.

International Organization for Standardization (ISO)

Call for U.S. TAG Administrator

ISO/TC 113 - Hydrometry

ANSI has been informed that the U.S. Department of the Interior/U.S. Geological Survey (USGS), the ANSI-accredited U.S. TAG Administrator for ISO/TC 113 – *Hydrometry*, wishes to relinquish their role as U.S. TAG Administrator.

ISO/TC 113 operates under the following scope:

Standardization of methods, procedures, instruments, and equipments relating to techniques for hydrometric determination of water level, velocity, discharge and sediment transport in open channels, precipitation and evapotranspiration, availability and movement of ground water, including:

- *terminology and symbols;*
- *collection, evaluation, analysis, interpretation and presentation of data;*
- *evaluation of uncertainties.*

ISO/TC 113 has also established the following active subcommittees:

- ISO/TC 113/SC 1 – *Velocity area methods*
- ISO/TC 113/SC 2 – *Flow measurement structures*
- ISO/TC 113/SC 5 – *Instruments, equipment and data management*
- ISO/TC 113/SC 6 – *Sediment transport*
- ISO/TC 113/SC 8 – *Ground water*

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

International Organization for Standardization (ISO)

Establishment of ISO Project Committee

ISO/PC 337 - Guidelines for the Promotion and Implementation of Gender Equality

A new ISO Project Committee, ISO/PC 337 – *Guidelines for the promotion and implementation of gender equality*, has been formed. The Secretariat has been assigned to France (AFNOR).

ISO/PC 337 operates under the following scope:

Standardization in the field of gender equality with the aim of developing a technical guidance on how to promote and implement gender equality in all types of organizations, public or private, regardless of their size, location and field of activity.

The objective is to develop guidelines on:

- *Concepts, terms and definitions;*
- *Identification of existing good practices;*
- *Definition of actions, strategies, policies for the promotion and implementation of gender equality*

Excluded: Related standardization work on diversity in human resources management as covered by ISO/TC 260 “Human resources management”

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

Establishment of ISO Subcommittee

ISO/TC 268/SC 2 - Sustainable Cities and Communities - Sustainable Mobility and Transportation

A new ISO Subcommittee, ISO/TC 268/SC 2 – *Sustainable cities and communities - Sustainable mobility and transportation*, has been formed. The Secretariat has been assigned to Japan (JISC).

ISO/TC 268/SC 2 operates in the area of *Sustainable mobility and transportation*, under the scope of ISO/TC 268 *Sustainable cities and communities*:

Standardization in the field of Sustainable Cities and Communities will include the development of requirements, frameworks, guidance and supporting techniques and tools related to the achievement of sustainable development considering smartness and resilience, to help all Cities and Communities and their interested parties in both rural and urban areas become more sustainable.

Note that ANSI is not currently a member of ISO/TC 268, *Sustainable cities and communities*, or ISO/TC 268/SC 1, *Smart community infrastructures*.

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

International Organization for Standardization (ISO)

ISO Proposal for a New Field of ISO Technical Activity

Menstrual Products

Comment Deadline: November 19, 2021

COPOLCO, ISO consumer policy committee, has submitted to ISO a proposal for a new field of ISO technical activity on Menstrual Products, with the following scope statement:

Standardization in the field of menstrual products, covering all products intended for both single and multiple use, regardless of material.

Anyone wishing to review the proposal can request a copy by contacting ANSI's ISO Team (isot@ansi.org), with a submission of comments to Steve Cornish (scornish@ansi.org) by close of business on **Friday, November 19, 2021**.

Registration of Organization Names in the United States

The Procedures for Registration of Organization Names in the United States of America (document ISSB 989) require that alphanumeric organization names be subject to a 90-day Public Review period prior to registration. For further information, please contact the Registration Coordinator at (212) 642-4975.

When organization names are submitted to ANSI for registration, they will be listed here alphanumerically.

Alphanumeric names appearing for the first time are printed in bold type. Names with confidential contact information, as requested by the organization, list only public review dates.

Public Review

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

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

Proposed Foreign Government Regulations

Call for Comment

U.S. manufacturers, exporters, regulatory agencies and standards developing organizations may be interested in proposed foreign technical regulations 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; F: (301) 926-1559; E: usatbtep@nist.gov or notifyus@nist.gov.



**BSR/ASHRAE/IES Addendum au
to ANSI/ASHRAE/IES Standard 90.1-2019**

Public Review Draft

**Proposed Addendum au to
Standard 90.1-2019, Energy Standard
for Buildings Except Low-Rise
Residential Buildings**

**First Public Review (November 2021)
(Draft Shows Proposed Changes to Current Standard)**

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FOREWORD

Currently, the Simplified Path (Section 6.3) is exempt from the requirements of Paragraph 6.4.1.5, Verification of Equipment Efficiencies. To rectify this, compliance with Paragraph 6.4.1.5 has been added for the applicable heating and cooling equipment allowed under the Simplified Path. Additionally, the exception to 6.2.2 has been moved as an exception to 6.2.1 for clarity as paragraph 6.2.1 lists the requirements for all compliance paths. These modifications will not increase the cost of construction and will help to assure fully rated equipment is used to comply with the Simplified Path.

For the reference of reviewers, Section 6.4.1.5 lists multiple ways to verify equipment efficiencies, including coverage under EPACT, inclusion under a certification program, the use of an independent laboratory test report when a covered product is not included under an existing certification program, and the use of data supplied by the manufacturer when no certification program exists for a covered product.

[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 au to 90.1-2019

Modify the standard as follows (IP and SI Units)

6.2 Compliance Paths

Mechanical equipment and systems providing heating, cooling, ventilating, or refrigeration shall comply with Section 6.2.1 and Section 6.2.2.

6.2.1 Requirements for all Compliance Paths

Mechanical equipment and systems shall comply with Section 6.1, “General”; Section 6.4, “Mandatory Provisions”; Section 6.7, “Submittals”; and Section 6.8, “Minimum Equipment Efficiency Tables.”

Exception to 6.2.1

When compliance is shown using Section 6.2.2(a), compliance with Section 6.4 is not required unless required in 6.3.2.

6.2.2 Additional Requirements to Comply with Section 6

Mechanical equipment and systems shall comply with one of the following:

- a. Section 6.3, “Simplified Approach Building Compliance Path for *HVAC Systems*”

Exception to 6.2.2(a)

~~When compliance is shown using Section 6.2.2(a), compliance with Section 6.4 is not required.~~

- b. Section 6.5, “Prescriptive Compliance Path”

Exception to 6.2.2(b)

HVAC systems only serving the heating, cooling, or ventilating needs of a *computer room* with *IT equipment* load greater than 10 kW shall be permitted to comply with Section 6.4, “Mandatory Provisions” and Section 6.6, “Alternative Compliance Path.”

6.3 Simplified Approach Building Compliance Path for HVAC Systems

6.3.1 Scope

The simplified approach is an optional path for compliance when the following conditions are met:

- a. The *building* is two stories or fewer in height.
- b. *Gross floor area* is less than 25,000 ft² (2300 m²)
- c. Each *HVAC system* in the *building* complies with the requirements listed in Section 6.3.2.

6.3.2 Criteria

The *HVAC system* must meet all of the following criteria:

- a. The *system* serves a single *HVAC zone*.
- b. The *equipment* must meet the variable flow requirements of Section 6.5.3.2.1.
- c. Cooling (if any) shall be provided by a unitary packaged or split-*system* air conditioner that is either air cooled or evaporatively cooled, with *efficiency* meeting the requirements shown in Table 6.8.1-1 (air conditioners), Table 6.8.1-2 (heat pumps), or Table 6.8.1-4 (packaged *terminal* and *room air conditioners* and heat pumps) for the applicable *equipment* category. Cooling *equipment* shall also comply with Section 6.4.1.5.
- d. The *system* shall have an *air economizer* meeting the requirements of Sections 6.5.1 and 6.4.3.12.
- e. Heating (if any) shall be provided by a unitary packaged or split-*system* heat pump that meets the applicable *efficiency* requirements shown in Table 6.8.1-2 (heat pumps) or Table 6.8.1-4 (packaged *terminal* and *room air conditioners* and heat pumps), a *fuel-* fired furnace that meets the applicable *efficiency* requirements shown in Table 6.8.1-5 (furnaces, duct furnaces, and unit heaters), an *electric resistance* heater, or a baseboard *system* connected to a *boiler* that meets the applicable *efficiency* requirements shown in Table 6.8.1-6 (*boilers*). Heating *equipment* shall also comply with Section 6.4.1.5.
- f. The *system* shall meet the exhaust air *energy* recovery requirements of Section 6.5.6.1.
- g. The *system* shall be controlled by a *manual* changeover or dual *set-point thermostat*.
- h. If a heat pump equipped with auxiliary internal *electric resistance* heaters is installed, *controls* shall be provided that prevent supplemental heater operation when the heating load can be met by the heat pump alone during both steady-state operation and *setback* recovery. Supplemental heater operation is permitted during outdoor coil defrost cycles. The heat pump must be controlled by either (1) a digital or electronic *thermostat* designed for heat pump use that energizes auxiliary heat only when the heat pump has insufficient capacity to

maintain *set point* or to warm up the *space* at a sufficient rate or (2) a multistage *space thermostat* and an *outdoor air thermostat* wired to energize auxiliary heat only on the last stage of the *space thermostat* and when *outdoor air* temperature is less than 40°F (4.4°C).

...

FOR REFERENCE ONLY:

The following is reference information for reviewers and is not part of the text under review.

Draft addendum AG – System Performance Ratio also proposes changes to Section 6.2. If both this addendum and addendum AG pass, the combined change to Section 6.2, including strikeouts and underlines will be:

6.2 Compliance Paths

Mechanical ~~equipment~~equipment and ~~systems~~systems providing heating, cooling, ventilating, or refrigeration shall comply with Section 6.2.1 and Section 6.2.2.

6.2.1 Requirements for all Compliance Paths

Mechanical ~~equipment~~equipment and ~~systems~~systems shall comply with all the following:

- a. Section 6.1, “General”;
- b. Section 6.4, “Mandatory Provisions”;
- c. Section 6.7, “Submittals”; and
- d. Section 6.8, “Minimum Equipment Efficiency Tables.”

Exception to 6.2.1(b)

When compliance is shown using Section 6.2.2(a), compliance with Section 6.4 is not required unless required in 6.3.2.

6.2.2 Additional Requirements to Comply with Section 6

Refrigeration equipment and systems shall comply with Section 6.5, “Prescriptive Compliance Path.” ~~Mechanical equipment and~~ All building HVAC systems shall comply with one of the following:

- a. Section 6.3, “Simplified Approach Building Compliance Path for HVAC Systems”

Exception to 6.2.2(a)

When compliance is shown using Section 6.2.2(a), compliance with Section 6.4 is not required.

- b. Section 6.5, “Prescriptive Compliance Path”

Exception to 6.2.2(b)

HVAC systems only serving the heating, cooling, or ventilating needs of a computer room with IT equipment load greater than 10 kW shall be permitted to comply with Section 6.4, “Mandatory Provisions” and Section 6.6, “Alternative Compliance Path.”

- c. Section 6.6.1, “Computer Room Systems Path”
- d. Section 6.6.2, “Mechanical System Performance Path” for systems listed in Table J.1.1

Informative Note:

Section 6.3 requires all HVAC systems in the building to qualify for the simplified path. Section 6.6.2 requires all allowable systems to meet the Appendix J requirements. 6.6.2 does allow part of the building to use the mechanical system performance rating path (TSPR) and part of the building to use Section 6.5 where there are excluded occupancy types or system types in Section J1.1.1.2. HVAC systems for larger computer rooms may comply with either 6.5, 6.6.1, or 6.6.2.

The following is reference information for reviewers and is not part of the text under review:

Draft addendum AG – System Performance Ratio also proposes changes to Section 6.2. If both this addendum and addendum AG pass, the final combined change to Section 6.2, without strikeouts and underlines will be:

6.2 Compliance Paths

Mechanical *equipment* and *systems* providing heating, cooling, ventilating, or refrigeration shall comply with Section 6.2.1 and Section 6.2.2.

6.2.1 Requirements for all Compliance Paths

Mechanical *equipment* and *systems* shall comply with all the following:

- a. Section 6.1, “General”;
- b. Section 6.4, “Mandatory Provisions”;
- c. Section 6.7, “Submittals”; and
- d. Section 6.8, “Minimum Equipment Efficiency Tables.”

Exception to 6.2.1(b)

When compliance is shown using Section 6.2.2(a), compliance with Section 6.4 is not required unless required in 6.3.2.

6.2.2 Additional Requirements to Comply with Section 6

Refrigeration *equipment* and *systems* shall comply with Section 6.5, “Prescriptive Compliance Path.” All *building HVAC systems* shall comply with one of the following:

- a. Section 6.3, “Simplified Approach Building Compliance Path for HVAC Systems”
- b. Section 6.5, “Prescriptive Compliance Path”
- c. Section 6.6.1, “Computer Room Systems Path”
- d. Section 6.6.2, “Mechanical System Performance Path” for systems listed in Table J.1.1

Informative Note:

Section 6.3 requires all HVAC systems in the building to qualify for the simplified path. Section 6.6.2 requires all allowable systems to meet the Appendix J requirements. 6.6.2 does allow part of the building to use the mechanical system performance rating path (TSPR) and part of the building to use Section 6.5 where there are excluded occupancy types or system types in Section J1.1.1.2. HVAC systems for larger computer rooms may comply with either 6.5, 6.6.1, or 6.6.2.



**BSR/ASHRAE/IES Addendum aw
to ANSI/ASHRAE/IES Standard 90.1-2019**

Public Review Draft

Proposed Addendum aw to Standard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings

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FOREWORD

Large diameter ceiling fans (LDCF) are used in many buildings covered by ASHRAE 90.1. In recent years, the usage of this class of products has increased significantly. However, the current ASHRAE 90.1 standard has no minimum energy efficiency requirements for this type of fan.

On January 19, 2017, the U.S. Department of Energy (DOE) completed a rulemaking and published a final rule establishing new federal minimum energy efficiency standards for ceiling fans. In doing so, it established the LDCF product class, which are ceiling fans with a blade span greater than 2.13 m (84 in.) and a corresponding efficiency metric of cubic feet per minute per Watt, or CFM/W.

The DOE test procedure's requirement is to round the measured blade span to the nearest inch, which does not appear in AMCA 230-15 or AMCA 208-18. Therefore, to provide equivalent requirements, the LDCF product class is all ceiling fans with blade spans greater than or equal to 84.5 in. (2.15m) when determined in accordance with the AMCA standards and 2.13 m (84 in.) when determined in accordance with 10 CFR 430.

On December 27, 2020, the U.S. House of Representatives Bill HR-133, aka the "Consolidated Appropriations Act, 2021," became Public Law No: 116-260. HR-133, Section 1008, entitled "Ceiling Fan Improvement Act," replaced the CFM/W efficiency metric with Ceiling Fan Energy Index (CFEI).

Specifically, Section 1008 of the Energy Act of 2020 (the "Act") amended section 325(ff)(6) of EPCA to specify that LDCF manufactured on or after January 21, 2020, are not required to meet minimum ceiling fan efficiency requirements in terms of the total airflow to the total power consumption, CFM/W, as established in the January 2017 Final Rule. Instead, LDCF are required to meet minimum efficiency requirements based on the CFEI metric. (42 U.S.C. 6295(ff)(6)(C)(i)(I), as codified). Small diameter ceiling fans use a different test procedure, have a different efficiency metric, and were not impacted by the Energy Act of 2020.

The Act requires large-diameter ceiling fans to have a CFEI greater than or equal to 1.00 at high speed and greater than or equal to 1.31 at 40 percent speed or the nearest speed that is not less than 40 percent speed. (42 U.S.C. 6295(ff)(6)(C)(i)(II), as codified). Further, the Act specifies that CFEI is to be calculated in accordance with ANSI/AMCA Standard 208-18, with the following modifications to the constants used for the reference fan: (I) Using an Airflow Constant (Q_0) of 26,500 cubic feet per minute; (II) Using a Pressure Constant (P_0) of 0.0027 inches water gauge; and (III) Using a Fan Efficiency Constant (h_0) of 42 percent. (42 U.S.C. 6295(ff)(6)(C)(ii), as codified). The EPCA language did not provide metric equivalents for the replacement coefficients, however, the metric conversions are provided in the proposed addendum.

This proposal adds the minimum energy efficiency requirements from 42 U.S.C. 6295(ff)(6)(C)(ii) for large diameter ceiling fans to ASHRAE 90.1 and is consistent with the federal standards. DOE's analysis from the final rule indicates that the adopted energy conservation standards for all ceiling fan product classes would save a significant amount of energy. Relative to the case without amended standards (referred to as the "no-

new-standards case”), the lifetime energy savings for ceiling fans purchased in the 30-year period amounts to 2.008 quadrillion British thermal units (Btu), or quads.

Economic Analysis

Building on the explanation above, additional details regarding the energy savings and economic calculations can be found in DOE’s Technical Support Document: Energy Efficiency Program For Consumer Products and Commercial and Industrial Equipment: Ceiling Fans, published November 2016 which can be found at the link below. <https://www.regulations.gov/document/EERE-2012-BT-STD-0045-0149>

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striketrough~~ (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 aw to 90.1-2019

Modify the standard as follows (IP and SI Units):

Make the following changes to Section 3.2:

ceiling fan energy index (CFEI): the ratio of the electric input power of a reference *ceiling fan* to the electric input power of the actual *ceiling fan* as calculated per AMCA 208 with the following modifications to the calculations for the reference fan: using an airflow constant (Q_0) of 26,500. cfm (12.507 m³/s), a pressure constant (P_0) of 0.002700 in. of water (0.6719 Pa), and a fan *efficiency* constant (η_0) of 42%.

Make the following changes to Section 3.3:

CFEI ceiling fan energy index

Make the following changes to Section 6:

6.4.1.1 Minimum Equipment Efficiencies—Listed Equipment—Standard Rating and Operating Conditions

Equipment shown in Tables 6.8.1-1 through 6.8.1-~~21~~²⁰ shall have a minimum performance at the specified rating conditions when tested in accordance with the specified test procedure. Where multiple rating conditions or performance requirements are provided, the *equipment* shall satisfy all stated requirements unless otherwise exempted by footnotes in the table. *Equipment* covered under the Federal Energy Policy Act of 1992 (EPACT) shall have no minimum *efficiency* requirements for operation at minimum capacity or other than standard rating conditions. *Equipment* used to provide *service water-heating* functions as part of a combination *system* shall satisfy all stated requirements for the appropriate *space* heating or cooling category.

Tables are as follows:

...
u. Table 6.8.1-21, “Ceiling Fan *Efficiency* Requirements”

...

6.4.1.3 Ceiling Fans

~~Large diameter ceiling fans shall be rated in accordance with 10 CFR 430 Appendix U or AMCA 230. The following data shall be provided:~~

- ~~a. Blade span (blade tip diameter)~~
- ~~b. Rated airflow and power consumption at the maximum speed~~

~~Informative Note: See Informative Appendix F for the U.S. Department of Energy requirements for US applications.~~

6.4.1.3.1

~~The data provided shall meet one of the following requirements:~~

- ~~a. It is determined by an independent laboratory.~~
- ~~b. It is included in a database published by USDOE.~~
- ~~c. It is certified under a program meeting the requirements of Section 6.4.1.5.~~

~~Exception to 6.4.1.3.1~~

~~Ceiling fans not covered in the scope of 10 CFR Part 430.~~

Table 6.8.1-21 Ceiling Fan Efficiency Requirements^a

<u>Equipment Type</u>	<u>Size Category</u>	<u>Minimum Efficiency^b</u>	<u>Test Procedure^c</u>
<u>Large diameter ceiling fan for applications outside the U.S.</u>	<u>Blade span ≥84.5 in. (2.15m)</u>	<u>CFEI ≥ 1.00 at high (maximum) speed</u> <u>CFEI ≥ 1.31 at 40% of high speed or the nearest speed that is not less than 40% of high speed</u>	<u>10 CFR 430 Appendix U or AMCA Standard 230 and AMCA Standard 208</u>

- a. The minimum efficiency requirements at both high speed and 40% of maximum speed must be met or exceeded to comply with this standard.
- b. Ceiling fans are regulated in the U.S. as consumer products under 10 CFR 430. For U.S. applications of large diameter ceiling fans, refer to Informative Appendix F, Table F-6, for the US DOE minimum efficiency requirements.
- c. Section 12 contains a complete specification of the referenced test procedure, including the referenced year version of the test procedure.

Add the following table to Appendix F:

Table F-6 Ceiling Fan Efficiency Requirements for U.S. Applications (see 10 CFR 430)

<u>Equipment Type</u>	<u>Size Category</u>	<u>Minimum Efficiency</u>	<u>Test Procedure</u>
<u>Large diameter ceiling fan</u>	<u>Blade span ≥84.5 in. (2.15m)</u>	<u>CFEI ≥ 1.00 at high (maximum) speed; and</u> <u>CFEI ≥ 1.31 at 40% of high speed or the nearest speed that is not less than 40% of high speed</u>	<u>10 CFR 430 Appendix U</u>

Make the following changes to Section 12:

12. Normative References

Reference	Title
Air Movement and Control Association International (AMCA) 30 West University Drive, Arlington Heights, IL 60004-1806	
ANSI/AMCA Standard 230-15 <u>with errata</u>	Laboratory Methods of Testing Air Circulating Fans for Rating and Certification
U.S. Department of Energy (DOE) 1000 Independence Avenue, SW, Washington, DC 20585	
<u>10 CFR Part 430, App U</u>	<u>Uniform Test Method for Measuring the Energy Consumption of Ceiling Fans</u>



**BSR/ASHRAE/IES Addendum az
to ANSI/ASHRAE/IES Standard 90.1-2019**

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FOREWORD

This proposal provides suggested language and justification for compressed air system coverage in ASHRAE Standard 90.1. Including compressed air system requirements in Standard 90.1 would ensure best energy management and design practices in a widespread, high-impact end use category that remains underserved by codes and standards. Compressed air system efficiency is only recently covered in code by California Title 24, Part 6 and federal appliance efficiency standards. This leaves a large opportunity across virtually all non-California jurisdictions for energy efficiency coverage of design and control measures. This report leverages and expands upon the work done for California Title 24 to recommend equivalent measures for Standard 90.1 (California Utilities Statewide Codes and Standards Team, 2013) (California Utilities Statewide Codes and Standards Team, 2020). The work done for these two successful California code adoption efforts is the primary resource for this proposal, including the fundamental research, stakeholder engagement, language development, and modeling therein. Significant additional information about the measures, modeling, and market conditions can be found in those publications.

Compressed air is often called the fourth utility for industrial customers after water, electricity, and natural gas. Compressed air energy consumption accounts for about 10% of all electricity usage in the industrial sector, about 91,050 GWh/yr in the United States (Xenergy, Inc., 2001) (Greenstone, et al., 2019).

Compressed air is used for a wide spectrum of applications and end uses including handheld tools, custom-built pneumatic machines, aeration, and conveyance in manufacturing processes, to name a few.

Despite widespread, energy-intensive nature of the compressed air market, there remain many opportunities for efficiency improvement and increased adoption of best practices. There are several key handbooks and guidelines for compressed air system design and management made available by trade associations, publishers, and compressed air manufacturing firms. Although there is consistency between these various best practice references amongst industry experts, adoption of best practices has not become standard practice.

This proposal suggests five ASHRAE 90.1 measures for compressed air systems, each of which addresses separate common sources of energy waste:

- Trim Compressors and Storage
- Advanced Controls
- Leak Testing
- Monitoring
- Pipe Sizing

A full report describing the background and analysis for the proposal has been shared with the MSC and will be available for reviewers online.

Cost Effectiveness

All five submeasures were separately analyzed for cost-effectiveness using the ASHRAE standard work process. Each passed the scalar of 12. The trim compressor, pipe sizing, pipe leak testing all had scalars less than 4 across the range of analyzed systems. The controls submeasure had scalar of 8.0 for the smallest system and the scalar improved as system size increased. The threshold capacity for the monitoring measure has a scalar of approximately 11, and the scalar improves as system size increases.

Details on how the measures were analyzed are in the accompanying documents:

- Compressed Air Measures for ASHRAE Standard 90.1.docx is a report created by the California Investor Owned Utilities Compressed Air Team.
- Compressed Air ASHRAE 90.1 Proposal.pptx is a presentation that summarizes the information in that document.

Both the document and the presentation will be made available to public comment reviewers with links in the foreword.

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Addendum az to 90.1-2019

Make the following changes to Chapter 3 (I-P and SI):

...

trim compressor: is a compressor that is designated for part-load operation, handling the short-term variable trim load of end uses, in addition to the fully loaded base compressors.

...

Make the following changes to Chapter 10 (I-P and SI):

10.4.6 Compressed Air Systems

All compressed air systems in factory industrial occupancies shall meet the requirements of Subsections 10.4.6.1 through 10.4.6.5. These requirements apply to the compressors, related piping systems, and controls that provide compressed air. This section does not apply to any equipment or controls that use or process the compressed air.

EXCEPTION to Section 10.4.6: Medical air systems.

10.4.6.1 Part Load Controls and Efficiency. Compressed air systems where the total motor power is 25 hp (18 kW) or more shall be equipped with appropriately sized trim compressor(s) and primary storage. The compressed air system shall comply with either A or B:

- A. The compressed air *system* shall include one or more variable speed drive (VSD) compressors. For *systems* with more than one compressor, the total combined capacity of the VSD compressor(s) acting as *trim compressors* must be at least 1.25 times the largest net capacity increment between combinations of compressors. The compressed air *system* shall include primary storage of at least three gallons per actual cubic feet per minute (acfm) (8 litres per L/s) of the largest trim compressor; or,
- B. The total effective trim capacity of a compressor system is the size of the continuous operational range where the specific power of the compressor(s) (kW/100 acfm) (kW/50 L/s) is within 15% of the specific power at their most efficient operating point. The total effective trim capacity of the system is the sum of the effective trim capacity of the trim compressors.

Systems shall include primary storage of at least four gallons per acfm (8 litres per L/s) of the largest trim compressor and meet 1 or 2:

1. Systems with more than one compressor, not including backup compressors, shall include a compressor or set of compressors with total effective trim capacity at least the size of the largest net capacity increment between combinations of compressors, or the size of the smallest compressor, whichever is larger.
2. For *systems* with one compressor, not including backup compressors, the total effective *trim capacity* shall include the range from 70% to 100% of rated capacity.

EXCEPTIONS to Section 10.4.6.1:

1. Alterations where the total combined added or replaced compressor motor power is less than the average per-compressor power of all compressors in the *system*.
2. Alterations where all added or replaced compressors are variable-speed drive (VSD) compressors and the compressed air *system* includes primary storage of at least three gallons per actual cubic feet per minute (acfm) (8 litres per L/s) of the largest trim compressor.
3. Compressed air *systems* that have been approved by the *Authority Having Jurisdiction* as having demonstrated that the *system* serves loads for which typical air demand fluctuates less than 10%.
4. Alterations of existing compressed air *systems* that include one or more centrifugal compressors.

10.4.6.2 Controls. Compressed air *systems* with three or more compressors, including backup compressors, with a combined input power of more than 150 hp (112 kW) shall operate with controls that are able to choose the most energy efficient combination and loading of compressors in the *system* based on the current compressed air demand.

10.4.6.3 Monitoring. Compressed air *systems* having a combined input power rating equal to or greater than 150 hp (112 kW) shall have an energy and air demand monitoring *system* with the following minimum requirements:

- A. Measurement of *system* pressure.
- B. Measurement or calculation of current or power of each compressor.
- C. Measurement or determination of total airflow from all compressors in acfm (L/s or m³/h).

D. Data logging of pressure, power in kW , airflow in acfm (L/s or m^3/h), and compressed air system specific power in $kW/100$ acfm ($kW/50 L/s$) at intervals of 5 minutes or less.

E. The equipment shall be configured to record not less than six months of data and shall be capable of exporting the data.

F. Visual trending display of each recorded point, load, and specific power.

10.4.6.4 Leak Testing of Compressed Air Piping. Compressed air system piping shall be pressure tested after being isolated from the compressed air supply, storage tanks, and end uses. The piping shall be pressurized to the design operating pressure and the pressure allowed to stabilize. Test pressures shall be held for no less than 30 minutes, with no loss of pressure greater than 1.0%.

For piping less than or equal to 50 adjoining feet (16m) in length connections shall optionally be tested with a noncorrosive leak-detecting fluid or other leak detecting methods at the discretion of the Authority Having Jurisdiction.

10.4.6.5 Pipe Sizing. For new systems and additions to systems with operating pressures above 50 psig (350 kPa (gage)), compressed air piping greater than 50 adjoining feet (16m) in length shall be designed and installed to minimize frictional losses in the distribution network.

Service line piping that delivers compressed air from distribution piping to end uses shall have inner diameters greater than or equal to 1 in.

Added or replaced piping in existing systems shall meet the requirements of A, below. New systems shall meet the requirements of either A or B.

- A. **Piping section average velocity.** Compressor room interconnection and main header piping shall be sized so that at coincident peak flow conditions, the average velocity in the segment of pipe is no greater than 20 ft/s (6 m/s). Compressor room interconnection and main header piping are the pipes that deliver compressed air from the compressor outlets to the inlet to the distribution piping. Each segment of distribution and service piping shall be sized so that at coincident peak flow conditions, the average velocity in the segment of pipe is no greater than 30 ft/s (9 m/s). Distribution piping is pipes that deliver compressed air from the compressor room interconnection piping or main header piping to the service line piping.
- B. **Piping total pressure drop.** Piping shall be designed such that piping frictional pressure loss at coincident peak loads are less than 5% of operating pressure between the compressor and connection at point of use, prior to any end use regulators.



**BSR/ASHRAE/IES Addendum bb
to ANSI/ASHRAE/IES Standard 90.1-2019**

Public Review Draft

**Proposed Addendum bb to
Standard 90.1-2019, Energy Standard
for Buildings Except Low-Rise
Residential Buildings**

**First Public Review (November 2021)
(Draft Shows Proposed Changes to Current Standard)**

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FOREWORD

This addendum updates the lighting power density (LPD) values in the Building Area Method Compliance Path. Standard 90.1-2019 established consistency among the lighting power compliance approaches and made the Space-by-Space LPD values the primary values. In the Building Area Method, the LPD value for each building type is developed via a weighted-average approach using the Space-by-Space LPD values.

There is no cost increase for this addendum. The proposed reduced lighting power density values are based on manufacturer data sheets. Manufacturers have improved the performance of their products and these values are based on their improvements.

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Addendum bb to 90.1-2019

Modify the standard as follows **(IP Units)**

9.5 Building Area Method Compliance Path

9.5.1 Building Area Method of Calculating Interior Lighting Power Allowance

Use the following steps to determine the *interior lighting power allowance* by the *Building Area Method*:

- a. Determine the appropriate *building area type* from Table 9.5.1 and the corresponding *LPD allowance*. For *building area types* not listed, selection of a reasonably equivalent type shall be permitted.
- b. Determine the *gross lighted floor area* in ft^2 of the *building area type*.
- c. Multiply the *gross lighted floor areas* of the *building area types* times the *LPD*.
- d. The *interior lighting power allowance* for the *building* is the sum of the lighting power allowances of all *building area types*. Trade-offs among *building area types* are permitted, provided that the total *installed interior lighting power* does not exceed the *interior lighting power allowance*.

Table 9.5.1 Lighting Power Density Allowances Using the Building Area Method

Building Area Type^a	LPD, W/ft²
Automotive facility	0.75 <u>0.72</u>
Convention center	0.64 <u>0.63</u>
Courthouse	0.70 <u>0.73</u>
Dining: Bar lounge/leisure	0.80 <u>0.73</u>
Dining: Cafeteria/fast food	0.76 <u>0.68</u>
Dining: Family	0.74 <u>0.64</u>
Dormitory	0.53 <u>0.51</u>
Exercise center	0.72 <u>0.70</u>
Fire station	0.56 <u>0.55</u>
Gymnasium	0.76 <u>0.73</u>
Health-care clinic	0.84 <u>0.76</u>
Hospital	0.96 <u>0.92</u>
Hotel/motel	0.56 <u>0.52</u>
Library	0.83
Manufacturing facility	0.82
Motion picture theater	0.44 <u>0.42</u>
Multifamily	0.45
Museum	0.55
Office	0.64 <u>0.61</u>
Parking garage	0.48 <u>0.17</u>
Penitentiary	0.60 <u>0.65</u>
Performing arts theater	0.84 <u>0.81</u>
Police station	0.66 <u>0.61</u>
Post office	0.65 <u>0.63</u>
Religious facility	0.67 <u>0.65</u>
Retail	0.84 <u>0.77</u>
School/university	0.72 <u>0.69</u>
Sports arena	0.76 <u>0.70</u>
Town hall	0.60 <u>0.66</u>
Transportation	0.50 <u>0.54</u>
Warehouse	0.45
Workshop	0.94 <u>0.86</u>

Modify the standard as follows (IP and **SI Units**)

9.5 Building Area Method Compliance Path

9.5.1 Building Area Method of Calculating Interior Lighting Power Allowance

Use the following steps to determine the *interior lighting power allowance* by the *Building Area Method*:

- a. Determine the appropriate *building area type* from Table 9.5.1 and the corresponding *LPD* allowance. For *building area types* not listed, selection of a reasonably equivalent type shall be permitted.
- b. Determine the *gross lighted floor area* in m^2 of the *building area type*.
- c. Multiply the *gross lighted floor areas* of the *building area types* times the *LPD*.
- d. The *interior lighting power allowance* for the *building* is the sum of the lighting power allowances of all *building area types*. Trade-offs among *building area types* are permitted, provided that the total *installed interior lighting power* does not exceed the *interior lighting power allowance*.

Table 9.5.1 Lighting Power Density Allowances Using the Building Area Method

Building Area Type^a	LPD, W/m²
Automotive facility	8.4 <u>7.8</u>
Convention center	6.9 <u>6.8</u>
Courthouse	8.5 <u>7.9</u>
Dining: Bar lounge/leisure	8.6 <u>7.8</u>
Dining: Cafeteria/fast food	8.2 <u>7.3</u>
Dining: Family	7.6 <u>6.9</u>
Dormitory	5.7 <u>5.5</u>
Exercise center	7.7 <u>7.6</u>
Fire station	6.0 <u>5.9</u>
Gymnasium	8.2 <u>8.1</u>
Health-care clinic	8.7 <u>9.8</u>
Hospital	10.3 <u>5.5</u>
Hotel/motel	6.0 <u>8.9</u>
Library	8.9
Manufacturing facility	8.8
Motion picture theater	4.7 <u>4.5</u>
Multifamily	4.8
Museum	5.9
Office	6.9 <u>6.9</u>
Parking garage	1.9
Penitentiary	7.4 <u>7.0</u>
Performing arts theater	9.0 <u>8.7</u>
Police station	7.4 <u>6.6</u>
Post office	7.0 <u>6.8</u>

Religious facility	7.2 <u>7.0</u>
Retail	9.0 <u>8.3</u>
School/university	7.7 <u>7.4</u>
Sports arena	8.2 <u>7.5</u>
Town hall	7.4 <u>7.1</u>
Transportation	5.4 <u>5.9</u>
Warehouse	4.8
Workshop	9.3 <u>9.2</u>



**BSR/ASHRAE/IES Addendum be
to ANSI/ASHRAE/IES Standard 90.1-2019**

Public Review Draft

Proposed Addendum be to Standard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings

**First Public Review (October 2021)
(Draft Shows Proposed Changes to Current Standard)**

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FOREWORD

The addendum updates the reference year for Standard 140 in Sections 11 and 12 as well as Appendix C and G.

ANSI/ASHRAE Standard 140-2020 updates the building thermal envelope and fabric load tests cases (Sections 5.2.1, 5.2.2, and 5.2.3) to address advancements in the state of the art in building performance modeling since their original publication for Standard 140-2001. For these cases, the tested modeling physics includes conduction, convection, and radiative (solar and infrared) heat transfer associated with the following:

- *Various building surfaces and their thermal mass*
- *Windows and solar gains through windows*
- *External shading devices*
- *Internally generated heat*
- *Outside-air infiltration/ventilation*
- *Sunspaces*
- *Variations in thermostat control (deadband and setback)*

Additionally, comments on the Standard-140 test specification since its inception identified ambiguities, further necessitating an update to the original specifications. The update work built on the initial version of the test suite published in ASHRAE Standard 140-2001 through 140-2017 and includes additional test cases, diagnostic outputs, and updated informative example results.

In addition, the addendum adds the requirement that input files from the simulation program used for Standard-140 testing should be made available. Also, clarifications were added related to:

- 1) *that the version of the software being tested must match that used for 90.1 performance-path modeling*
- 2) *which specific Standard-140 tests are required*
- 3) *that testing is required for each complete simulation program including interface and engine.*

This addendum impacts optional performance paths in the standard designed to provide increased flexibility and therefore was not subjected to cost effectiveness analysis.

Addendum be to 90.1-2019

Revise Section 11 Energy Cost Budget

11.4.1.4 Simulation program testing requirements

11.4.1.4.1 The simulation program shall be tested according to ASHRAE Standard 140, except for Sections 7 and 8 of Standard 140. The required tests shall include building thermal envelope and fabric load tests

(Sections 5.2.1, 5.2.2, and 5.2.3), ground coupled slab-on-grade analytical verification tests (Section 5.2.4), space-cooling equipment performance tests (Section 5.3), space-heating equipment performance tests (Section 5.4), and air-side HVAC equipment analytical verification tests (Section 5.5), along with the associated reporting (Section 6).

11.4.1.4.2 The test results and modeler reports shall be posted on a publicly available website and shall include the test results of the ~~simulation program~~ simulation program and input files used for generating the results along with the results of the other ~~simulation programs~~ simulation programs included in ASHRAE Standard 140, Annexes B8 and B16. The modeler report in Standard 140, Annex A2, Attachment A2.7, shall be completed for results exceeding the maximum or falling below the minimum of the reference values ~~or~~ and for ~~missing omitted~~ results.

11.4.1.4.3 The testing shall be performed for the version of the simulation program used to calculate the design energy cost and energy cost budget.

Informative Notes:

1. There are no pass/fail criteria established by this requirement.
2. Based on Section 3 definition, simulation program includes the simulation engine and the corresponding user interface. The testing of a simulation program only meets the requirements of 11.4.1.4 for that simulation program and cannot be used as proxy for documenting compliance of another simulation program that uses the same simulation engine.

Revise Section 12 Normative References

ANSI/ASHRAE Standard 140-2017 2020 - Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs Evaluating Building Performance Simulation Software

Revise Normative Appendix C Methodology for Building Envelope Trade-Off Option in Section 5.6

C3.1.4 Simulation program testing requirements

C3.1.4.1 The simulation program shall be tested according to ASHRAE Standard 140, except for Sections 7 and 8 of Standard 140. The required tests shall include building thermal envelope and fabric load tests (Sections 5.2.1, 5.2.2, and 5.2.3), ground coupled slab-on-grade analytical verification tests (Section 5.2.4), space-cooling equipment performance tests (Section 5.3), space-heating equipment performance tests (Section 5.4), and air-side HVAC equipment analytical verification tests (Section 5.5), along with the associated reporting (Section 6).

C3.1.4.2 The test results and modeler reports shall be posted on a publicly available website and shall include the test results of the the ~~simulation program~~ simulation program and input files used for generating the results alongside the results of the other ~~simulation programs~~ simulation programs included in ASHRAE Standard 140 Annexes B8 and B16. The modeler report in Standard 140, Annex A2, Attachment A2.7 shall be completed for results exceeding the maximum or falling below the minimum of the reference values ~~or~~ and for ~~missing omitted~~ results.

C3.1.4.3 The testing shall be performed for the version of the *simulation program* used to calculate the *proposed envelope performance factor* and *base envelope performance factor*.

Informative Notes:

1. There are no pass/fail criteria established by this requirement.
2. Based on Section 3 definition, *simulation program* includes the simulation engine and the corresponding user interface. The testing of a *simulation program* only meets the requirements of G2.2.4 for that *simulation program* and cannot be used as proxy for documenting compliance of another *simulation program* that uses the same simulation engine.

Revise Normative Appendix G Performance Rating Method

G2.2.4 Simulation program testing requirements

G2.2.4.1 The *simulation program* shall be tested according to ASHRAE Standard 140, except for Sections 7 and 8 of Standard 140. The required tests shall include building thermal envelope and fabric load tests (Sections 5.2.1, 5.2.2, and 5.2.3), ground coupled slab-on-grade analytical verification tests (Section 5.2.4), space-cooling equipment performance tests (Section 5.3), space-heating equipment performance tests (Section 5.4), and air-side HVAC equipment analytical verification tests (Section 5.5), along with the associated reporting (Section 6).

G2.2.4.2 The test results and modeler reports shall be posted on a publicly available website and shall include the test results of the ~~simulation program~~ *simulation program* and input files used for generating the results along with the results of the other ~~simulation programs~~ *simulation programs* included in ASHRAE Standard 140, Annexes B8 and B16. The modeler report in Standard 140, Annex A2, Attachment A2.7 shall be completed for results exceeding the maximum or falling below the minimum of the reference values ~~or~~ and for ~~missing omitted~~ results.

G2.2.4.3 The testing shall be performed for the version of the *simulation program* used to calculate the *proposed building performance and baseline building performance*.

Informative Notes:

1. There are no pass/fail criteria established by this requirement.
2. Based on Section 3 definition, *simulation program* includes the simulation engine and the corresponding user interface. The testing of a *simulation program* only meets the requirements of G2.2.4 for that *simulation program* and cannot be used as proxy for documenting compliance of another *simulation program* that uses the same simulation engine.



**BSR/ASHRAE/IES Addendum bf
to ANSI/ASHRAE/IES Standard 90.1-2019**

Public Review Draft

**Proposed Addendum bf to
Standard 90.1-2019, Energy Standard
for Buildings Except Low-Rise
Residential Buildings**

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FOREWORD

This addendum updates the values for the decorative and retail lighting power allowances, adds a new additional allowance for videoconferencing, and moves the additional power allowances and required controls to a table for easy reference.

The decorative lighting allowance was introduced in 90.1-1999. Initially, most decorative lighting sources used halogen or incandescent sources. As of 2021, use of LED lighting has become much more widespread in both the lamps used in decorative luminaires and the luminaires themselves. This addendum proposes a reduced decorative allowance to account for LED sources becoming more common place in decorative lighting. Not all decorative luminaires have integral LED sources however, so the proposed value also accounts for some decorative luminaires which utilize medium base sockets and require the project to use the rated wattage of the socket instead of the wattage of the installed lamp.

The proposed retail allowance values reflect a modeled approach based on the lighting model developed for the 90.-2019 Standard. The previous model assumed Retail 3 and 4 utilized high color incandescent sources. The proposed reductions in allowance for Retail 3 and 4 are the result of inclusion of high color quality efficient LED sources.

This addendum also proposes a new power allowance for the purpose of videoconferencing in interior spaces where the lighting in the space meets ANSI/IES/AVIXA RP-38.

These power allowances are optional and do not have to be used. Therefore, no cost analysis is necessary for this addendum. However, costs were considered. The proposed decorative and retail allowances reflect changes in technology from incandescent which is less efficient and less common, compared with LED.

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Addendum bf to 90.1-2019

Modify the standard as follows (IP and SI Units)

9.5.3 Additional Interior Lighting Power

When using the Space-by-Space Method, an increase in the *interior lighting power allowance* is

allowed for specific lighting functions. Additional power shall be allowed only if the specified lighting is installed and controlled independently of the *general* lighting in accordance with Table 9.5.3.1 ~~Section 9.4.1.1(j)~~. This additional power shall be used only for the specified *luminaires* and shall not be used for any other purpose unless otherwise indicated. Lighting control requirements referenced in Section 9.5.3 are the only required controls for these applications.

An increase in the *interior lighting power allowance* is permitted in the following cases:

- a. For each *space* in which lighting is ~~specified to be~~ installed in addition to the *general lighting* for the purpose of decorative appearance or for highlighting art or exhibits not exempted in Table 9.2.2.1, ~~Item 11~~, provided that the additional lighting power shall not exceed the value in Table 9.5.3.1 ~~0.75 W/ft² of such spaces~~.
- b. For lighting *equipment* installed in sales areas and specifically designed and directed to highlight merchandise, provided that the additional lighting power shall not exceed the value in Table 9.5.3.1 ~~shall not exceed the formula for calculate the additional lighting in Table 9.5.3.1~~. power as follows:

$$\text{Additional Interior Lighting Power Allowance} = 1000 \text{ W} + (\text{Retail Area 1} \times 0.45 \text{ W/ft}^2) + (\text{Retail Area 2} \times 0.45 \text{ W/ft}^2) + (\text{Retail Area 3} \times 1.05 \text{ W/ft}^2) + (\text{Retail Area 4} \times 1.88 \text{ W/ft}^2)$$

where

Retail Area 1 = the *floor* area for all products not listed in Retail Areas 2, 3, or 4

Retail Area 2 = the *floor* area used for the sale of vehicles, sporting goods, and small electronics

Retail Area 3 = the *floor* area used for the sale of furniture, clothing, cosmetics, and artwork

Retail Area 4 = the *floor* area used for the sale of jewelry, crystal, and china

- c. For spaces in which lighting is installed for the purpose of videoconferencing and the lighting in that space meets ANSI/IES/AVIXA RP-38, additional lighting power shall be allowed per Table 9.5.3.1.

Table 9.5.3.1 Additional Lighting Power

<u>Section</u>	<u>Description</u>	<u>Additional Lighting Power</u>	<u>Required Controls</u>
9.5.3(a)	<u>Decorative</u>	0.70 W/ft ² (7.53 W/m ²)	9.4.1.1(j)
9.5.3(b)	<u>Retail Sales</u>	750 W + (Retail Area 1 × 0.40 W/ft ²) + (Retail Area 2 × 0.40 W/ft ²) + (Retail Area 3 × 0.70 W/ft ²) + (Retail Area 4 × 1.00 W/ft ²) 750 W + (Retail Area 1 × 4.30 W/m ²) + (Retail Area 2 × 4.30 W/m ²) + (Retail Area 3 × 7.53 W/m ²) + (Retail Area 4 × 10.76 W/m ²)	9.4.1.1(j)
9.5.3(c)	<u>Video Conferencing</u>	0.50 W/ft ² (5.38 W/m ²)	See Table 9.5.2.1 <i>space</i> types for required controls

Exception to 9.5.3

Other merchandise categories may be included in Retail Areas 2 through 4 above, provided that justification documenting the need for additional lighting power based on visual inspection, contrast, or other critical display is approved by the *authority having jurisdiction*.

[...]

Make the following changes to Informative Appendix E: Informative References (I-P and SI):

Subsection No.	Reference	Title/Source
<u>9.5.3</u>	<u>ANSI/IES/AVIXA RP-38-17</u>	<u>Recommended Practice: Lighting Performance for Small to Medium Sized Videoconferencing Rooms</u>



**BSR/ASHRAE/IES Addendum bh
to ANSI/ASHRAE/IES Standard 90.1-2019**

Public Review Draft

Proposed Addendum bh to Standard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings

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FOREWORD

This addendum proposes a change to the on-site photovoltaic system parameter for Temperature Coefficient of Power described in Section 11 Table 11.5.1 Part 15. The parameters described in this section are used to determine the amount of on-site renewable energy to be included in the Energy Cost Budget when a Proposed Design does not include an on-site renewable energy system. The parameters were originally proposed to align with default inputs for a Standard efficiency solar panel in PV Watts, a commonly used tool for estimating annual photovoltaic generation. In aligning baseline requirements with PV Watts inputs, the intent was to make it easy for an energy analyst to estimate the required on-site generation for the energy cost budget in those cases when the proposed design did not include an on-site renewable energy system.

During the public review process of Addendum ck the panel efficiency was updated from 15% to 19% to more closely align with the average panel efficiency being used in the US marketplace. In making that update the Temperature Coefficient of Power was not similarly updated. The default Temperature Coefficient of Power in PV Watts for a 19% efficient panel is -0.35 %/ °C. This change will make it easier for users of Section 11 to quickly estimate the amount of on-site renewable energy to include in the Energy Cost Budget using the PV Watts tool or the PV Watts methodology that is embedded within some common energy simulation tools.

This change does not change the cost-effectiveness of the standard.

Addendum bh to 90.1-2019

Revise Table 11.5.1

15. On-site Renewable Energy

On-site renewable energy in the *proposed design* shall be determined as follows:

- a. Where a complete *system* providing *on-site renewable energy* exists, the model shall reflect the actual *system* type using actual component capacities and efficiencies.
- b. Where a *system* providing *on-site renewable energy* has been designed, the *system* model shall be consistent with design documents.
- c. Where no *system* exists or is specified to provide *on-site renewable energy*, no *system* shall be modeled.

On-site renewable energy shall be included in the *budget building design* when required by Section 10.5.1 and shall be determined as follows:

- a. Where a *system* providing *on-site renewable energy* has been modeled in the *proposed design* the same *system* shall be modeled identically in the *budget building design* except the rated capacity shall meet the requirements of Section 10.5.1.1. Where more than one type of *on-site renewable energy* system is modeled the total capacities shall be allocated in the same proportion as in the *proposed design*.
- b. Where no *system* exists or is specified to provide *on-site renewable energy* in the *proposed design*, *on-site renewable energy* shall be modeled as an unshaded photovoltaic system with the following physical characteristics:
 - Size: Rated capacity per Section 10.5.1.1.
 - Module Type: Crystalline Silicon Panel with a glass cover, 19.1% nominal efficiency and temperature coefficient of ~~-0.47~~ -0.35%/°C, Performance shall be based on a reference temperature of 77°F (25°C) and irradiance of 317 Btu/h·ft² (1000 W/m²).
 - Array Type: Rack mounted array with installed nominal operating cell temperature (INOCT) of 103°F (45°C).
 - Total System Losses (DC output to AC output): 11.3%.
 - Tilt: 0-degrees (mounted horizontally).
 - Azimuth: 180 degrees.

If the *on-site renewable energy* system cannot be modeled in the *simulation program* Section 11.4.5 shall be used.



**BSR/ASHRAE/IES Addendum bi
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Public Review Draft

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FOREWORD

This proposed addendum addresses existing building envelope requirements when performing a roof replacement by:

- *Providing a new definition for roof replacement that aligns with the definition and provisions of the 2021 IBC*
- *Clarifying the specific roof replacement requirements in a new subsection 5.1.3.1 of Section 5.1.3.*
- *Requiring that, where areas of a roof have difficult conditions that may prohibit full, code compliant levels of insulation from being achieved, roof replacement designs must be provided to the local authority having jurisdiction for review and approval. (A new definition of “approved” is being proposed in a separate CMP.)*

Currently, “roof replacements” are not specifically defined in the Standard. They also are not specifically addressed as an alteration in Section 5.1.3 and are not one of the specific exclusions listed. Thus, replacement roofs must comply with the charging language of Section 5.1.3 as a general requirement for any alteration. This is the case for any alteration not specifically excepted in Section 5.1.3.

This has resulted in existing roofs with challenging flashing conditions to be unable to comply simply with the increased roof insulation levels. This addendum provides a pathway for those roofs.

Clarifying the specific requirements for roof replacement will serve to minimize marketplace confusion and inconsistency in complying with the general requirements of the Standard in Section 5.1.3 - particularly regarding roof replacements for roofs with insulation entirely above deck. The inclusion of specific requirements also allows roof replacements to be performed without having to comply with the entirety of Section 5 as currently required by Section 5.1.3.

The committee has long believed that it is at the time of roof replacement that existing building roofs have the lowest cost and best opportunity to be brought up to code or as close to code as possible.

This proposal was deemed cost effective as it does not increase roof insulation levels on previously roofed conditioned space above the current criteria.

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Addendum bi to 90.1-2019 – roof replacement

3.2 Definitions

roof replacement: an *alteration* that includes the removal of all existing layers of the *roof* assembly materials down to the *roof* deck and installing a new *roof* assembly above the *roof* deck.

...

5.1.3 Envelope Alterations

Alterations to the *building envelope* shall comply with Section 5 for insulation, air leakage, and *fenestration* applicable to those specific portions of the *building* that are being altered.

Exceptions to 5.1.3

The following *alterations* need not comply with these requirements, provided such *alterations* will not increase the *energy* use of the *building*:

1. Installation of storm windows or glazing panels over existing glazing, provided the storm window or glazing panel contains a low-emissivity coating. However, a low-emissivity coating is not required where the existing glazing already has a low-emissivity coating. Installation is permitted to be either on the inside or outside of the existing glazing.
2. Replacement of glazing in existing sash and frame, provided the *U-factor* and *SHGC* will be equal to or lower than before the glass replacement.
3. *Alterations* to *roof*, *wall*, or *floor* cavities that are insulated to full depth with insulation having a minimum nominal value of R-3.0/in.
4. *Alterations* to *walls* and *floors*, where the existing structure is without framing cavities and no new framing cavities are created.
5. *Roof recovering*.
6. ~~*Roof replacements*~~ Removal and replacement of a *roof* membrane where there is existing *roof* insulation is integral to or is located below the *roof* deck.
7. Replacement of existing *doors* that separate a *conditioned space* from the exterior shall not require the installation of a vestibule or revolving *door*, provided that an existing vestibule that separates a *conditioned space* from the exterior shall not be removed.
8. Replacement of existing *fenestration*, provided that the area of the replacement *fenestration* does not exceed 25% of the total *fenestration* area of an *existing building* and that the *U-factor* and *SHGC* will be equal to or lower than before the *fenestration* replacement.

5.1.3.1 Roof Replacement for Roofs With Insulation Entirely Above Deck

Roof replacement for *roofs with insulation entirely above deck* shall comply with Section 5.5.3.1, shall not be required to comply with the requirements of Section 5.4.3, and shall not increase the *energy* use of the *building*. Where the insulation requirements in Section 5.5.3.1.1 cannot be met due to existing *roof* conditions, the *roof replacement* shall be constructed in accordance with approved *construction documents* which shall include:

1. A *roof* inspection report documenting existing *roof* conditions.
2. A *roof* design minimizing deviation from the requirements of Section 5.5.3.1.1.

INFORMATIVE NOTE: The proposed *roof* design should be prepared by an approved entity capable of determining whether the design complies with the requirements of Section 5.1.3.1 to the extent practical.

...

5.5 Prescriptive Building Envelope Compliance Path

...

5.5.3.1 Roof Insulation

5.5.3.1.1 All *roofs* shall comply with the insulation values specified in Tables 5.5-0 through 5.5-8.

5.5.3.1.2 Roof Curbs

Skylight and other roof curbs shall be insulated to the level of roofs with insulation entirely above deck or not less than R-5.0, whichever is less.

5.5.3.1.3 Joints in Roof Insulation

Joints in the insulation shall be installed in accordance with Section 5.8.1.10.

5.5.3.1.4 Roof Solar Reflectance and Thermal Emittance

Section content remains unchanged

Exceptions to 5.5.3.1.4

Exception content remains unchanged

Table 5.5.3.1-4 Increased Roof Insulation Level

Table content remains unchanged



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~~representative of the designed assembly shall be performed in accordance with Section A9.1 of the procedures required in Normative Appendix A where approved by the code official.~~

2. For multiple assemblies within a single *class of construction* for a single *space conditioning category*, compliance shall be shown for either (a) the most restrictive requirement or (b) an area-weighted average *U-factor*, *C-factor*, or *F-factor*.

...

Normative Appendix A

Rated R-Value of Insulation and Assembly U-Factor, C-Factor, and F-Factor Determinations

A1 GENERAL

Where using Normative Appendix A to demonstrate compliance with Section 5.5, the thermal performance of *building envelopes* shall be determined in accordance with Section A1.1 or A1.2.

A1.1 Precalculated Assembly U-Factors, C-Factors, F-Factors, or Heat Capacities

~~The *U-factors*, *C-factors*, *F-factors*, and *heat capacities* for typical *construction building envelope* assemblies shall be used for assemblies consistent with the specifications are included in Sections A2 through A8. These values shall be used for all calculations unless otherwise allowed by Section A1.2. These precalculated values shall be permitted to be used to demonstrate compliance for a *building envelope* assembly with any type of exterior covering or interior finish.~~

~~Interpolation between values in a particular table in Normative Appendix A shall be permitted is allowed for rated R-values of insulation, including insulated sheathing. Extrapolation beyond values in a table in Normative Appendix A is not allowed.~~

A1.2 Applicant-Determined Assembly U-Factors, C-Factors, F-Factors, or Heat Capacities

Testing, calculation, and modeling procedures in Section A9 shall be used to determine *U-factors*, *C-factors*, *F-factors* or *heat capacities* for assemblies that are not addressed by or are different from the assembly specifications listed in Sections A2 through A8 and the associated precalculated values.

~~If the *building official* determines that the proposed *construction* assembly is not adequately represented in Sections A2 through A8, the applicant shall determine appropriate values for the assembly using the assumptions in Section A9.~~

~~An assembly is deemed to be adequately represented if:~~

- ~~a. the interior structure, hereafter referred to as the base assembly, for the class of construction is the same as described in Sections A2 through A8 and~~
- ~~b. changes in exterior or interior surface building materials added to the base assembly do not increase or decrease the R-value by more than 2 from that indicated in the descriptions in Sections A2 through A8.~~

~~Insulation, including insulated sheathing, is not considered a building material.~~

...

A9 DETERMINATION OF ~~ALTERNATE~~ ALTERNATIVE ASSEMBLY U-FACTORS, C-FACTORS, F-FACTORS, OR HEAT CAPACITIES

A9.1 General

Alternative assembly *U-factors*, *C-factors*, *F-factors* or *heat capacities* Component *U-factors* for other *opaque* assemblies shall be determined in accordance with Section A9 only if approved by

~~the building official in accordance with Section A1.2.~~ The procedures required for each *class of construction* are specified in Section A9.2. Testing shall be performed in accordance with Section A9.3. Calculations shall be performed in accordance with Section A9.4.

...

A9.4 Calculation Procedures and Assumptions

The following procedures and assumptions shall be used for all calculations. *R-values* for air films, air spaces, insulation, and *building materials* shall be taken from Sections A9.4.1 through A9.4.4, respectively. In addition, applicable ~~the appropriate~~ assumptions listed in Sections A2 through A8, including framing factors, shall be used.

...

Informative Appendix E

Informative References

This appendix contains informative references for the convenience of users of Standard 90.1 and to acknowledge source documents when appropriate. Some documents are also included in Section 12, “Normative References,” because there are other citations of those documents within the standard that are normative.

ASHRAE

...

A9.4 2021 ASHRAE Handbook—Fundamentals ASHRAE

A1.1 Hogan, J.F. Approach for Opaque Envelope U-factors for ASHRAE/IESNA 90.1-1989R, ASHRAE Transactions volume 101, Part 2, 1995.

Note to reviewers:

Addendum av, when published, would change the title of Appendix A and add a Section A1.3 as follows. These changes do not affect this addendum.

Normative Appendix A

Rated R-Value of Insulation and Assembly U-Factor, C-Factor, and F-Factor Determinations, and Thermal Bridging Determinations

....

A1.3 Applicant-Determined Psi-Factors and Chi-Factors for Thermal Bridges

The applicant shall determine appropriate values for *point thermal bridges* and *linear thermal bridges* using the assumptions in Section A10.

...



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FOREWORD

A humidity working group was formed to review implications of the 2019 changes in Std 62.1 that limit the dew point rather than the RH and also require limiting the dew point during unoccupied periods. The committee reviewed the humidity language throughout the standard to improve and align with Std 62.1-2019. This effort also addressed efficient humidification and dehumidification, with the goals of minimizing simultaneous heating and cooling and encouraging use of site recovered energy.

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Addendum bk to 90.1-2019

Make the following changes to Section 6.3.2 (I-P and SI):

6.3.2.(i) – simple building

...

i. The *system controls* shall not permit *reheat* or any other form of simultaneous heating and cooling for humidity control.

Exception to 6.3.2.(i)

Humidity control assisted by hot-gas reheat or heat from 100% *site-recovered energy* is permitted.

Make the following changes to Section 6.4.3.3.2 (I-P and SI):

6.4.3.3.2 Setback Controls

Heating *systems* shall be equipped with *controls* capable of and configured to *automatically* restart and temporarily operate the *system* as required to maintain zone temperatures above an adjustable heating *set point* at least 10°F below the occupied heating *set point*. Cooling *systems* shall be equipped with *controls* capable of and configured to *automatically* restart and temporarily operate the *mechanical cooling system* at the lowest practical fan speed as required to maintain zone temperatures below an adjustable cooling *set point* at least 5°F above the occupied cooling *set point* or to prevent ~~high~~ maximum *space* humidity levels as required by Standard 62.1.

Make the following changes to Section 6.4.3.3.5 (I-P and SI):

6.4.3.3.5 Automatic Control of HVAC in Hotel/Motel Guest Rooms

Hotels and motels with greater than 50 guest rooms shall be provided with *automatic controls* for the HVAC *equipment* serving each guest room capable of and configured according to the requirements in the following subsection.

6.4.3.3.5.1 Guest Room HVAC Set-Point Control

HVAC *systems* serving hotel guest rooms shall be capable of and configured with three modes of temperature *control*.

- a. **Rented and unoccupied.** Within 20 minutes of all occupants leaving the guest room, HVAC *set points* shall be *automatically* raised by at least 4°F from the occupant *set point* in the cooling mode and *automatically* lowered by at least 4°F from the occupant *set point* in the heating mode.
- b. **Unrented and unoccupied.** HVAC *set points* shall be *automatically reset* to 80°F or higher in the cooling mode and to 60°F or lower in the heating mode. The HVAC *set points* in the unrented and unoccupied guest room modes shall be initiated within 16 hours of the guest room being continuously unoccupied or within 20 minutes of the guest room being continuously unoccupied where a *networked guest room control system* indicates the guest room is unrented.
- c. **Occupied.** HVAC *set points* shall return to their occupied *set points* once occupancy is sensed.

Exceptions to 6.4.3.3.5.1

1. A *networked guest room control system* shall be permitted to return the *thermostat set points* to their default occupied *set points* 60 minutes prior to the time the room is scheduled to be occupied.
2. ~~Cooling for humidity control shall be permitted during rented and unoccupied or unrented and unoccupied periods.~~ Dehumidification shall be permitted to limit the *space* humidity levels as required by Standard 62.1 during unoccupied mode for both rented and unrented periods.

Make the following changes to Section 6.4.5 (I-P and SI):

6.4.5 Walk-In Coolers and Walk-In Freezers

- ...
- j. Antisweat heater *controls* shall reduce the *energy* use of the antisweat heater as a function of the ~~relative~~ humidity in the air outside the *door* or in response to the condensation on the inner glass pane.
- ...

Make the following changes to Section 6.4.6 (I-P and SI):

6.4.6 Refrigerated Display Case

- ...
- d. Antisweat heater *controls* shall reduce the *energy* use of the antisweat heater as a function of the ~~relative~~ humidity in the air outside the *door* or in response to the condensation on the inner glass pane.

Make the following changes to Section 11.4.1.1 (I-P and SI):

11.4.1.1

The simulation program shall be approved by the adopting authority and shall, at a minimum, have the ability to explicitly model all of the following:

- a. 8760 hours per year
- b. Hourly variations in occupancy, lighting power, miscellaneous equipment power, thermostat set points, humidity set points, and HVAC system operation, defined separately for each day of the week and holidays
- c. Thermal mass effects
- d. Ten or more thermal zones
- e. Part-load performance curves for mechanical equipment
- f. Capacity and efficiency correction curves for mechanical heating and mechanical cooling equipment
- g. Air-side economizer and fluid economizer with integrated control
- h. The budget building design characteristics unless otherwise specified in Section 11.5

Make the following changes to Section 11.5.2 (I-P and SI):

11.5.2 HVAC Systems

...

d. Minimum Outdoor Air Ventilation Rate. Minimum *outdoor air ventilation* rates shall be the same for both the *budget building design* and *proposed design*. Exhaust air ~~heat~~ energy recovery shall be modeled for the *budget building design* in accordance with Section 6.5.6.1.

Make the following changes to Appendix G (I-P and SI):

Normative Appendix G

G2.2.1

The *simulation program* shall be approved by the *rating authority* and shall, at a minimum, have the ability to explicitly model all of the following:

- a. 8760 hours per year.
- b. Hourly variations in occupancy, lighting power, miscellaneous *equipment* power, *thermostat set points*, *humidity set points*, and *HVAC system* operation, defined separately for each day of the week and holidays.
- c. Thermal mass effects.
- d. Ten or more thermal zones.
- e. Part-load performance curves for mechanical *equipment*.
- f. Capacity and *efficiency* correction curves for *mechanical heating* and *mechanical cooling equipment*.
- g. *Air economizers* with integrated *control*.
- h. *Baseline building design* characteristics specified in Section G3.



**BSR/ASHRAE/IES Addendum bm
to ANSI/ASHRAE/IES Standard 90.1-2019**

Public Review Draft

**Proposed Addendum bm to
Standard 90.1-2019, Energy Standard
for Buildings Except Low-Rise
Residential Buildings**

**First Public Review (November 2021)
(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).

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.

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ASHRAE, 180 Technology Parkway NW, Peachtree Corners, GA 30092

BSR/ASHRAE/IES Addendum bm to ANSI/ASHRAE Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
 First Public Review Draft

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(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 occupied standby requirement in 90.1-2019 requires shutting off ventilation air to unoccupied zones. For single-zone systems, this saves fan energy and the thermal energy associated with conditioning outside air. For multi-zone systems, the zone ventilation air is shut off, which reduces fan energy and reheat energy. Still, currently, there is not an explicit requirement to reset the outside air amounts at the system level. Thus there are not the thermal energy savings associated with conditioning less outside air. Significant energy savings can be achieved by also resetting the minimum outside airflow setpoint at the air handler.

This will not increase construction costs. For systems that already have the ability to reset the minimum outside airflow setpoint, this is a minor sequence change. No additional hardware or software is required. ASHRAE Guideline 36-2021 already includes the sequences needed for multiple zone systems to reset the effective minimum outdoor air setpoint based on a zone outdoor air requirement of zero for all zones in occupied-standby mode.

[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 bm to 90.1-2019

Modify as follows:

6.5.3.8 Occupied-Standby Zone Controls

Zones serving only rooms that are required to have automatic partial OFF or automatic full OFF lighting controls per Section 9.4.1.1, where the ASHRAE Standard 62.1 occupancy category permits ventilation air to be reduced to zero when the space is in occupied-standby mode, and when using the Ventilation Rate Procedure, shall meet the following within five (5) minutes of all rooms in that zone entering occupied-standby mode.

- a. Active heating set point shall be setback at least 1°F (0.5 °C).
- b. Active cooling set point shall be setup at least 1°F (0.5 °C).
- c. All airflow supplied to the zone shall be shut off whenever the space temperature is between the active heating and cooling set points.

BSR/ASHRAE/IES Addendum bm to ANSI/ASHRAE Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
 First Public Review Draft

6.5.3.8.1 Occupied-Standby Control of Multiple-Zone Systems

Multiple-zone systems that are capable of resetting the minimum outdoor air setpoint and that serve zones with occupied-standby zone controls, shall reset the minimum outdoor air setpoint based on a zone outdoor air requirement of zero for all zones in occupied-standby mode.

Exception to 6.5.3.8

Multiple-zone systems without automatic zone flow control dampers.

Informative Note

ASHRAE Guideline 36 includes sequences for this reset.

Make the following changes to Informative Appendix E: Informative References (I-P and SI):

Subsection No.	Reference	Title/Source
<u>6.5.3.8</u>	<u>ASHRAE Guideline 36-2021</u>	<u>High-Performance Sequences of Operation for HVAC Systems</u>

ASME B16.21-2016
(Revision of ASME B16.21-2011)

2016

Proposed Revision of:

Nonmetallic Flat Gaskets for Pipe Flanges

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ASME Codes and Standards

Record 21-1954

ø16P

Table 4 Gasket Dimensions for ASME B16.5 Class 150, Pipe Flanges and Flanged Fittings

NPS	Gasket I.D.	Flat Ring O.D.	Full Face Gasket			
			O.D.	Number of Holes	Hole Diameter	Bolt Circle Diameter
1/2	21	48	89	4	5/8	60.3
3/4	27	57	98	4	5/8	69.9
1	33	67	108	4	5/8	79.4
1 1/4	42	76	117	4	5/8	88.9
1 1/2	48	86	127	4	5/8	98.4
2	60	105	152	4	3/4	120.7
2 1/2	73	124	178	4	3/4	139.7
3	89	137	191	4	3/4	152.4
3 1/2	102	162	216	8	3/4	177.8
4	114	175	229	8	3/4	190.5
5	141	197	254	8	7/8	215.9
6	168	222	279	8	7/8	241.3
8	219	279	343	8	7/8	298.5
10	273	340	406	12	1	362.0
12	324	410	483	12	1	431.8
14	356	451	533	12	1 1/8	476.3
16	406	514	597	16	1 1/8	539.8
18	457	549	635	16	1 1/4	577.9
20	508	606	699	20	1 1/4	635.0
22	559	660	750	20	1 3/8	692.2
24	610	718	813	20	1 3/8	749.3

GENERAL NOTE: Dimensions are in millimeters, except for hole diameter dimensions, which are in inches.

Table 5 Flat Ring Gasket Dimensions for ASME B16.5, Pipe Flanges and Flanged Fittings, Classes 300, 400, 600, and 900

NPS	Gasket I.D.	Gasket O.D.			
		Class 300	Class 400	Class 600	Class 900
1/2	21	54	54	54	64
3/4	27	67	67	67	70
1	33	73	73	73	79
1 1/4	42	83	83	83	89
1 1/2	48	95	95	95	98
2	60	111	111	111	143
2 1/2	73	130	130	130	165
3	89	149	149	149	168
3 1/2	102	165	162	162	...
4	114	181	178	194	206
5	141	216	213	241	248
6	168	251	248	267	289
8	219	308	305	321	359
10	273	362	359	400	435
12	324	422	419	457	498
14	356	486	483	492	521
16	406	540	537	565	575
18	457	597	594	613	638
20	508	654	648	683	699
22	559	705	702	733	...
24	610	775	768	791	838

GENERAL NOTE: Dimensions are in millimeters.

Record 21-1954**Table 7 Flat Ring Gasket Dimensions for ASME B16.47 Series A, Large Diameter Steel Flanges,
Classes 150, 300, 400, and 600**

NPS	I.D.	O.D.			
		Class 150	Class 300	Class 400	Class 600
22 {Note (1)}	559	660	705	702	733
26	660	775	835	832	867
28	711	832	899	892	914
30	762	883	953	946	972
32	813	940	1 006	1 003	1 022
34	864	991	1 057	1 054	1 073
36	914	1 048	1 118	1 118	1 130
38	965	1 111	1 054	1 073	1 105
40	1 016	1 162	1 114	1 127	1 156
42	1 067	1 219	1 165	1 178	1 219
44	1 118	1 276	1 219	1 232	1 270
46	1 168	1 327	1 273	1 289	1 327
48	1 219	1 384	1 324	1 346	1 391
50	1 270	1 435	1 378	1 403	1 448
52	1 321	1 492	1 429	1 454	1 499
54	1 372	1 549	1 492	1 518	1 556
56	1 422	1 607	1 543	1 568	1 613
58	1 473	1 664	1 594	1 619	1 664
60	1 524	1 715	1 645	1 683	1 721

GENERAL NOTE: Dimensions are in millimeters.

NOTE: (1) NPS 22 for reference only. Size not listed in ASME B16.47.

Record 21-1954

ø16P

Table I-4 Gasket Dimensions for ASME B16.5 Class 150, Pipe Flanges and Flanged Fittings

NPS	Gasket I.D.	Flat Ring O.D.	Full Face Gasket			
			O.D.	Number of Holes	Hole Diameter	Bolt Circle Diameter
½	0.84	1.88	3.50	4	0.62	2.38
¾	1.06	2.25	3.88	4	0.62	2.75
1	1.31	2.62	4.25	4	0.62	3.12
1¼	1.66	3.00	4.63	4	0.62	3.50
1½	1.91	3.38	5.00	4	0.62	3.88
2	2.38	4.12	6.00	4	0.75	4.75
2½	2.88	4.88	7.00	4	0.75	5.50
3	3.50	5.38	7.50	4	0.75	6.00
3½	4.00	6.38	8.50	8	0.75	7.00
4	4.50	6.88	9.00	8	0.75	7.50
5	5.56	7.75	10.00	8	0.88	8.50
6	6.62	8.75	11.00	8	0.88	9.50
8	8.62	11.00	13.50	8	0.88	11.75
10	10.75	13.38	16.00	12	1.00	14.25
12	12.75	16.13	19.00	12	1.00	17.00
14	14.00	17.75	21.00	12	1.12	18.75
16	16.00	20.25	23.50	16	1.12	21.25
18	18.00	21.62	25.00	16	1.25	22.75
20	20.00	23.88	27.50	20	1.25	25.00
22	22.00	26.00	29.50	20	1.38	27.25
24	24.00	28.25	32.00	20	1.38	29.50

GENERAL NOTE: Dimensions are in inches.

Table I-5 Flat Ring Gasket Dimensions for ASME B16.5, Pipe Flanges and Flanged Fittings, Classes 300, 400, 600, and 900

NPS	Gasket I.D.	Gasket O.D.			
		Class 300	Class 400	Class 600	Class 900
½	0.84	2.12	2.12	2.12	2.50
¾	1.06	2.62	2.62	2.62	2.75
1	1.31	2.88	2.88	2.88	3.12
1¼	1.66	3.25	3.25	3.25	3.50
1½	1.91	3.75	3.75	3.75	3.88
2	2.38	4.38	4.38	4.38	5.62
2½	2.88	5.12	5.12	5.12	6.50
3	3.50	5.88	5.88	5.88	6.62
3½	4.00	6.50	6.38	6.38	...
4	4.50	7.12	7.00	7.62	8.12
5	5.56	8.50	8.38	9.50	9.75
6	6.62	9.88	9.75	10.50	11.38
8	8.62	12.12	12.00	12.62	14.12
10	10.75	14.25	14.12	15.75	17.12
12	12.75	16.62	16.50	18.00	19.62
14	14.00	19.12	19.00	19.38	20.50
16	16.00	21.25	21.12	22.25	22.62
18	18.00	23.50	23.38	24.12	25.12
20	20.00	25.75	25.50	26.88	27.50
22	22.00	27.75	27.63	28.88	...
24	24.00	30.50	30.25	31.12	33.00

GENERAL NOTE: Dimensions are in inches.

Record 21-1954

ø16p

**Table I-7 Flat Ring Gasket Dimensions for ASME B16.47 Series A, Large Diameter Steel Flanges,
Classes 150, 300, 400, and 600**

NPS	I.D.	O.D.			
		Class 150	Class 300	Class 400	Class 600
22 [Note (1)]	22.00	26.00	27.75	27.63	28.88
26	26.00	30.50	32.88	32.75	34.12
28	28.00	32.75	35.38	35.12	36.00
30	30.00	34.75	37.50	37.25	38.25
32	32.00	37.00	39.62	39.50	40.25
34	34.00	39.00	41.62	41.50	42.25
36	36.00	41.25	44.00	44.00	44.50
38	38.00	43.75	41.50	42.25	43.50
40	40.00	45.75	43.88	44.38	45.50
42	42.00	48.00	45.88	46.38	48.00
44	44.00	50.25	48.00	48.50	50.00
46	46.00	52.25	50.12	50.75	52.25
48	48.00	54.50	52.12	53.00	54.75
50	50.00	56.50	54.25	55.25	57.00
52	52.00	58.75	56.25	57.26	59.00
54	54.00	61.00	58.75	59.75	61.25
56	56.00	63.25	60.75	61.75	63.50
58	58.00	65.50	62.75	63.75	65.50
60	60.00	67.50	64.75	66.25	67.75

GENERAL NOTE: Dimensions are in inches.

NOTE: (1) NPS 22 for reference only. Size not listed in ASME B16.47.



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AWWA C623

Substantive Changes for Public Review

The following technical or substantive revisions have been made to AWWA C623 standard in response to input received during the Standards Council ballot SCLB #03-21 (closed March 17, 2021) and the public comment review (closed April 19, 2021). The changes for consideration in this review are shown in ~~strikeout~~/underline in the items below.

1. Revise Section 4.2 CIPP Construction

The constructor, specifically including constructor's onsite supervisory personnel, shall have current training and certification applicable to the CIPP product ~~and qualified~~ and installation method being used to establish constructor's competence to perform the rehabilitation in accordance with the Purchaser's Documents. ~~The constructor's onsite supervisory personnel must be competent to ensure that the pipe is suitably cleaned and prepared and that the resin components are mixed, handled and used within the manufacturer's requirements.~~

2. Revise Section 4.3.1 Materials/General

Materials shall comply with the requirements of the Safe Drinking Water Act, ~~Clean Water Act~~ and ~~other~~ applicable federal, state, provincial, territorial, or other authoritative ~~and local~~ regulations for potable water systems ~~as applicable~~.

3. Revise Section 4.6.4.1 Curing/General

The CIPP shall be cured in accordance with the manufacturer's recommendations and procedures required for the process, which ~~should~~ shall be ~~generally~~ in accordance with the applicable installation procedures in ASTM F1216, ASTM F1743 or ASTM F2019.

4. Revise Section 5.4.1.2.1 Flexural Properties

Carry out flexural modulus and flexural strength tests in accordance with ASTM D790 and/or ISO 11296-4, Annex B. Sample size shall be sufficient to secure ~~a minimum of three specimens, preferably~~ the recommended five specimens for testing. A minimum of three specimens shall be allowed where five

~~suitable specimens cannot be obtained from the sample.~~ For anisotropic materials, flexural properties ~~should shall~~ be obtained, ~~as a minimum, in the hoop direction and preferably~~ in the hoop and axial direction to confirm overall behavior of the CIPP. When suitable specimens for testing in both the hoop and axial direction cannot be obtained from the sample, flexural properties shall be obtained in the hoop direction as a minimum.

5. Revise Sections 5.4.1.2.2 and 5.4.1.2.3 Tensile Strength Methods

5.4.1.1.1 Tensile Strength – Method 1. Carry out tests in accordance with ASTM D638 using Type I specimens when the CIPP ~~is includes~~ a fiber reinforcement composite. Sample size shall be sufficient to secure ~~a minimum of three specimens, preferably~~ the recommended five specimens for testing. A minimum of three specimens shall be allowed where five suitable specimens cannot be obtained from the sample. For anisotropic materials, tensile properties ~~should shall~~ be obtained, ~~as a minimum, in the hoop direction and preferably~~ in the hoop and axial direction to confirm overall behavior of the CIPP. When suitable specimens for testing in both the hoop and axial direction cannot be obtained from the sample, tensile properties shall be obtained in the hoop direction as a minimum.

5.4.1.1.2 Tensile Strength – Method 2. Carry out tests in accordance with ASTM D3039. Sample size shall be sufficient to secure ~~a minimum of three specimens, preferably~~ the recommended five specimens for testing. A minimum of three specimens shall be allowed where five suitable specimens cannot be obtained from the sample. For anisotropic materials, tensile properties ~~should shall~~ be obtained, ~~as a minimum, in the hoop direction and preferably~~ in the hoop and axial direction to confirm overall behavior of the CIPP. When suitable specimens for testing in both the hoop and axial direction cannot be obtained from the sample, tensile properties shall be obtained in the hoop direction as a minimum.

6. Revise Section 5.5.4 Basis for Rejection – Additonal measures.

All additional measures to confirm that a CIPP deemed as structurally deficient will comply with all stipulated design life requirements shall be carried out ~~at the constructor's expense~~ by the constructor in a manner acceptable to the purchaser, or as specifically identifield for remedy in the Purchaser's Documents.

2 Normative references

The following normative documents contain provisions that, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements subject to this American National Standard should apply the most recent editions of the normative documents listed below. This standard is intended to be used in conjunction with the following American National Standards:

ANSI B11.0 – 2020 *Safety of machinery*

ANSI B11.19 – 2019 *Performance Requirements for Risk Reduction Measures: Safeguarding and other Means of Reducing Risk*

ANSI B11.26–2018, *Functional Safety for Equipment: General Principles for the Design of Safety Control Systems Using ISO 13849-1*

ANSI / ASSP Z244.1-2016 (R2020), *The Control of Hazardous Energy – Lockout, Tagout and Alternative Methods.*

NFPA 70 – 2020, *The National Electrical Code*

NFPA 70E – 2021, *Standard for Electrical Safety in the Workplace*

NFPA 79 – 2021, *Electrical Standard for Industrial Machinery*

ANSI / IES-RP-7-2001, *Practice for Industrial Lighting*

2.1 Informative references

The following documents to the right are not normative references, but may be helpful in conforming to the requirements of this standard.

E2 Informative references

E2.1

ANSI B11.1–2009 (R2020), *Safety Requirements for Mechanical Power Presses*

ANSI B11.2–2013 (R2020), *Safety Requirements for Hydraulic / Pneumatic Power Presses*

ANSI B11.20–2017 *Safety Requirements for the Integration of Machinery into a System*

ANSI B11.18–2006 (R2020), *Safety Requirements for Machines Processing or Slitting Coiled or Non-coiled Metal*

ANSI B11.TR1–2016, *Ergonomic Guidelines for the Design, Installation and Use of Machines*

ANSI B11.TR4–2004 (R2015), *Selection of Programmable Electronic Systems (PES/PLC) for Machine Tools*

ANSI / ASME B20.1–2006, *Safety Standard for Conveyors and Related Equipment*

ASME *Boiler and Pressure Vessel Code*, 2010. Division 1 (Section VIII)

ISO 4413-2010, *Hydraulic Fluid Power Systems – General Rules and Safety Requirements for Systems and their Components*

ISO 4414-2010, *Pneumatic Fluid Power Systems – General Rules and Safety Requirements for Systems and their Components*

ANSI Z535.1–2017, *Safety Colors*

ANSI Z535.2–2011 (R2017), *Environmental and Facility Safety Signs*

ANSI Z535.3–2011 (R2017), *Criteria for Safety Symbols*

ANSI Z535.4–2011 (R2017), *Product Safety Signs and Labels*

ANSI Z535.5–2011 (R2017), *Accident Prevention Tags and Labels*

ANSI Z535.6–2011 (R2017), *Product Safety Information on Product Manuals, Instructions, etc.*

ANSI / IESNA-RP-7-2001, *Industrial Lighting*

ANSI / RIA R15.06-2012, *Safety Requirements for Industrial Robots and Robot Systems*

8.3 Performance of the safety function(s)

The design and performance of a safety function, including the SRP/CS shall be commensurate with the intended risk reduction. The greater the intended risk reduction to be provided by the safety function, the higher the required reliability performance shall be.

The SRP/CS shall be appropriate for the intended use and shall conform to the applicable requirements in ANSI B11.19 and ANSI B11.26.

E8.3

Some risk reduction measures involve safety functions which are performed/executed by a system of controls. The control system elements responsible for the safety function are considered the safety-related parts of the control system (SRP/CS).

SRP/CS can be electrical, electronic, programmable electronic system, mechanical, hydraulic, and/or pneumatic or any combination thereof (see also, ANSI B11.26). The SRP/CS may be composed of sensors, logic solvers and actuators.

2 Normative references

The following normative documents contain provisions that, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements subject to this American National Standard should apply the most recent editions of the normative documents listed below.

ANSI B11.0-2020, *Safety of Machinery*

ANSI B11.19-2019, *Performance Requirements For Risk Reduction Measures: Safeguarding And Other Means Of Reducing Risk*

ANSI B11.26–2018, *Functional Safety for Equipment: General Principles for the Design of Safety – Control Systems Using ISO 13849-1*

ANSI A14.3-2008 (R2018), *Ladders – Fixed – Safety Requirements*

NFPA 70-2017, *National Electrical Code*

NPFA-70E-2018, *Standard for Electrical Safety in the Workplace*

NFPA 79-2021, *Electrical Standard for Industrial Machinery*

ANSI / ISO 4413: 2010, *Hydraulic fluid power – General rules and safety requirements for systems and their components*

ANSI / ISO 4414:2010, *Pneumatic fluid power – General rules and safety requirements for systems and their components*

2.1 Informative references

The following documents to the right are not normative references and are not essential, but can be helpful in conforming to the requirements of this standard.

E2.1

ANSI B11.TR1 – 2016 *Ergonomic Guidelines for the Design and Installation of Machine Tools*

ANSI B11.TR2 – 1997 *Mist Control Considerations for the Design, Installation and Use of Machine Tools Using Metalworking Fluids*

B11.TR5 – 2006 (R2017) *Sound (Noise) Measurement Guidelines*

ANSI / ASME Boiler and Pressure Vessel Code;
Division 1, Section VIII (2021)

ANSI / IES-RP-7-2017, *Industrial Lighting*.

ISO 2806: 1994, *Industrial automation systems –
Numerical control of machines – Vocabulary*

ISO 13849-1: 2015, *Safety of machinery – Safety-
related part of control systems – Part 1: General
Principles for Design*

Final Draft

8.7 Performance of the safety function(s)

The design and performance of a safety function, including the SRP/CS shall be commensurate with the intended risk reduction. The greater the intended risk reduction to be provided by the safety function, the higher the required reliability performance shall be.

The SRP/CS shall be appropriate for the intended use and shall conform to the applicable requirements in ANSI B11.19 and ANSI B11.26.

E8.7

Some risk reduction measures involve safety functions which are performed/executed by a system of controls. The control system elements responsible for the safety function are considered the safety-related parts of the control system (SRP/CS).

SRP/CS can be electrical, electronic, programmable electronic system, mechanical, hydraulic, and/or pneumatic or any combination thereof (see also, ANSI B11.26). The SRP/CS may be composed of sensors, logic solvers and actuators.

Final Draft

2 Normative references

The following normative documents contain provisions that, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision and users of this standard are encouraged to investigate applying the most recent revisions of the normative references listed in clause 2.

ANSI B11.0 – 2020 *Safety of machinery*

ANSI B11.19 – 2019 *Performance Requirements for Risk Reduction Measures: Safeguarding and other Means of Reducing Risk*

ANSI B11.26 – 2018 *Functional Safety for Equipment: Practical Application of Control Systems Using ISO 13849 – General Principles for the Design of Electrical and Fluid Power Control Systems*

NFPA 79 – 2020 *Electrical Standard for Industrial Machinery*

NFPA 70 – 2021 *National Electric Code*

NFPA 70E – 2021 *Standards for Electrical Safety in the Workplace*

ANSI / ASSP Z244.1:2016 – *Control of Hazardous Energy Lockout Tagout and Alternative Methods*

Informative references

The following documents to the right are not normative references and are not essential, but can be helpful in conforming to the requirements of this standard.

E2.1

ANSI B11.20-2017 *Safety Requirements for the Integrated of Machinery into a System*

ASME Boiler & Pressure Vessel Code, Section VIII, Division III - 2019

ANSI Z535 series of safety standards on safety signs, labels, colors, symbols and alerting

ANSI / IESNA-RP-7-2001, *Industrial Lighting*

B11.TR1-2016 *Ergonomic Guidelines for the Design, Installation and Use of Machines*

B11.TR5-2006 (R2017) *Sound Level Measurement Guidelines – A guide for Measuring, Evaluating, Documenting and Reporting Sound Levels Emitted by Machinery*

ISO 7010:2011 *Graphical symbols – Safety colours and safety signs – Registered safety signs*

ISO 3864 Series *Graphical symbols – Safety colours and safety signs*

8.7 Performance of the safety function(s) E8.7

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Some risk reduction measures involve safety functions which are performed/executed by a system of controls. The control system elements responsible for the safety function are considered the safety-related parts of the control system (SRP/CS).

SRP/CS can be electrical, electronic, programmable electronic system, mechanical, hydraulic, and/or pneumatic or any combination thereof (see also, ANSI B11.26). The SRP/CS may be composed of sensors, logic solvers and actuators.

Final Draft

BSR/UL 401, Standard for Portable Spray Hose Nozzles for Fire-Protection Service

1. Clarification of Gasket Requirements.

PROPOSAL

6 General

6.3 ~~Each nozzle~~ Nozzles intended for use with hose connections in accordance with NFPA 1963 shall be provided with a resilient gasket fitted in the recess in the nozzle. The gasket shall have dimensions in accordance with ~~the Standard for Screw Threads and Gaskets for Fire Hose Connections, ANSI~~ NFPA 1963. Gaskets and washers shall not project into the waterway.

2. Clarification of Testing Operating Force for Nozzles with Multiple Flow Setting Adjustments.

PROPOSAL

14 Tests on Controls

14.8 Subsequent to the testing described in 14.6, the sample nozzle is to be subjected to a pressure of 1-1/2 times the rated inlet pressure but not less than 300 psi (2070 kPa), for 1 minute with the nozzle closed. After the supply pressure has been reduced to the rated inlet pressure and before making any other adjustments to the nozzle controls, the operating force required to just open (for rotational type control) or to open (for lever type control) is to be measured in accordance with the method described in 14.6 except that the rated inlet pressure is to be applied to the nozzle rather than 100 psig (689 kPa). All nozzle functions, such as pattern selection, flush, flow adjustments, and shutoff, are then to be tested and observations made for proper functioning. The remaining operating force measurements of the rotational or lever type control are then to be taken in accordance with the method described in 14.6 except that the rated inlet pressure is to be applied to the nozzle rather than 100 psig (689 kPa). ~~This testing is to be conducted at the maximum flow setting, if the nozzle is provided with multiple flow setting adjustments.~~

BSR/UL 514C, Standard for Safety for Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers

Topic 1. Assembled boxes (box with removable walls)

PROPOSAL

5.1.8 - . An assembled box (a box with one or more removable wall) shall have no gaps in the walls that would permit the free passage of a 1/32 inch (0.8 mm) drill rod.

32 Supports

32.1 General

32.1.1 A bracket or other device for securing a flush-device or other box not intended to support a fixture/luminaire to a structural wall stud shall withstand a pull of 50 pounds (222 N) when tested in accordance with [32.1.2](#). The bracket may bend; but the results of the test are not acceptable if the bracket breaks, or if the box is pulled loose from the bracket. For assembled boxes (outlet boxes with one or more removable walls) there shall be no gaps in the walls that would permit the free passage of a 1/32 inch (0.8 mm) drill rod.

32.4 Boxes intended to be installed in a finished structure

32.4.1 As a result of the test described in [32.4.2](#) – [32.4.5](#), the box supporting means shall not crack or break or result in the face of the box being permanently displaced more than 1/8 inch (3.2 mm) from the plane of the face of the test surface when measured 1 minute after the test load is removed. For assembled boxes (outlet boxes with one or more removable wall) there shall be no gaps in the walls that would permit the free passage of a 1/32 inch (0.8 mm) drill rod.

35 Mold Stress

35.1 There shall not be a change in any dimension greater than 10 percent for a box, and no openings greater than 1/16 inch (1.6 mm) between a box and the plane across the open face of the box when the box is conditioned as described in [35.2](#). For assembled boxes (outlet boxes with one or more) removable walls there shall be no gaps in the walls that would permit the free passage of a 1/32 inch (0.8 mm) drill rod.

36 Resistance to Crushing

36.1 When tested as described in [36.2](#), a force of not less than 2500 pounds (11,121 N) shall be necessary to cause a box in the face-up position to continue to yield to the crushing force at a rate greater than the rate at which the force is applied. For outlet boxes with removable walls there shall be no gaps in the walls that would permit the free passage of a 1/32 inch (0.8 mm) drill rod. Following the Crush force an assembled box with one or more a removable wall that becomes dislodged may be reattached provided the product remains operable and undamaged with no gaps in the walls that would permit the free passage of a 1/32 inch (0.8 mm) drill rod.

37 Resistance to Impact

37.1 A box tested in accordance with [37.2](#) shall not show any loss of integrity and shall not permit the free passage of a 1/32 inch (0.8 mm) drill rod through any resulting crack in the box or nailing attachment or separation between a removable wall that would permit the free passage of a 1/32 inch (0.8 mm) drill rod. Following the Impact, assembled boxes with one or more a removable wall that becomes dislodged may be reattached provided the product remains operable and undamaged with no gaps in the walls that would permit the free passage of a 1/32 inch (0.8 mm) drill rod.

37.3 Eight of the ten sample boxes tested in accordance with [37.4](#) and [37.6](#) shall not show any loss of integrity and shall not permit the free passage of a 1/32 inch (0.8 mm) drill rod through any resulting crack in the box or nailing attachment. For assembled boxes (outlet boxes with removable walls) there shall be no gaps in the walls that would permit the free passage of a 1/32 inch (0.8 mm) drill rod.

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BSR/UL 758, Standard for Safety for Appliance Wiring Material**PROPOSAL(S)****1. Addition of Halogen Free (HF) or Low-Smoke Halogen Free (LSHF) Wire to 51.2.**

For brevity, items (a) – (n) are not shown.

51.2 Markings on the tag, reel, or carton shall contain the following elements:

- o) The “HF” suffix to designate cable where all of the combustible materials used in the construction (e.g., insulation, fillers, jackets) are halogen-free in accordance with the "Outline of Investigation for Acid Gas, Acidity and Conductivity of Combusted Materials and Assessment of Halogens," UL 2885.
- p) The “LSHF” suffix to designate the cable that meets the “-HF” requirements and also complies with the requirements for low smoke when tested in accordance with IEC 61034-2, "Measurement of Smoke Density of Cables Burning Under Defined Conditions – Part 2: Test Procedure and Requirements".

In addition to the markings noted above, a cable that contains other markings complies with the intent of this requirement as long as they are not confusing or misleading.

2. Insulation Resistance Test Time, Revised 35.1**35 Short Term Insulation-Resistance Test in Water at Room Temperature (Wet Rated AWM)**

35.1 The finished insulated conductor (any jacket, shield, and covering removed) shall have an insulation resistance value of greater than or equal to 2.5 megohms based on 1000 feet (0.75 megohm based on one kilometer) of conductor. The PTFE and ETFE insulation shall result in the full range of sizes of finished wire having an insulation resistance not less than 1000 megohms based on 1000 conductor feet or 304 megohms based on a conductor kilometer. The test is to be conducted in accordance with the test Short-term insulation resistance, Method 1 in the Standard for Wire and Cable Test Methods, UL 2556. The immersion time shall be 6 hours or longer.

BSR/UL 1425, *Standard for Safety for Cables for Non-Power-Limited Fire-Alarm Circuits*

Topic 1. Introduction of Optional Suffixes HF, LSHF and ST1 and Deletion of Limited Combustible

PROPOSAL

25.1 Cable of any type on which there is an overall cable jacket on or through which the designation "sun res" or "sunlight resistant" indicated in 41.1(g) is legible qualifies for use in sunlight where the ratio of the average tensile strength and ultimate elongation of five conditioned specimens of the overall jacket to the average tensile strength and ultimate elongation of five unconditioned specimens of the overall jacket is 0.80 or more when the overall jacket is tested as described in ~~Carbon-Arc and~~ Xenon-Arc Tests, Section 1200 of UL 1581, using 720 h of xenon-arc ~~or carbon-arc~~ conditioning

38 ~~Limited Combustible-Reserved for Future Use~~

~~38.1 Type NPLFP cable that is marked as in 41.1(m) to indicate limited combustible, shall comply with the requirements in NFPA 90A when tested in accordance with the Standard Test Method for Potential Heat of Building Materials, NFPA 259, and the Standard for Test for Surface Burning Characteristics of Building Materials, UL 723 (NFPA 255)~~

41 Information on or in the Cable

~~41.1 m) The designation "Limited Combustible" for Type NPLFP cable that complies with the requirements in 38.1. This marking is not required.~~

~~m n) The supplementary letters "-OF" shall be added immediately after the type letters for each cable that contains one or more optical-fiber members.~~

~~e) n) The designation "wet" or "wet location" on cables with NEC conductors suitable for use in wet locations (see 7.3.1) or non-NEC conductors that comply with the requirements for long term insulation resistance in water in 31.1~~

~~o) "HF" suffix to designate cable where all of the combustible materials used in the construction (e.g., insulation, fillers, jackets) are halogen-free in accordance with the Outline of Investigation for Acid Gas, Acidity and Conductivity of Combusted Materials and Assessment of Halogens, UL 2885. This marking is not required.~~

~~p) "LSHF" suffix to designate the cable that meets the "-HF" requirements and also complies with the requirements for low smoke when tested in accordance with IEC 61034-2, Measurement of Smoke Density of Cables Burning Under Defined Conditions – Part 2: Test Procedure and Requirements. This marking is not required.~~

~~q) The designation ST1 (signifying "limited smoke") added as a suffix immediately following the type letters for each cable construction that complies with the smoke requirements described in the Standard for Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables, UL 1685. This marking is not required.~~

BSR/UL 2250, *Standard for Safety for Instrumentation Tray Cable*

Topic 1. Introduction of Optional Suffixes HF, LSHF and ST1 and Deletion of LS

PROPOSAL

29.1 The cable is for use in sunlight where the ratio of the average tensile strength and ultimate elongation of five conditioned specimens of the overall jacket to the average tensile strength and ultimate elongation of five unconditioned specimens of the overall jacket is 0.80 or more when the finished cable is conditioned and tested as described in ~~Carbon-Arc and Xenon-Arc Tests~~, Section 1200 of UL 1581, using 720 h of ~~carbon-arc or xenon-arc~~ exposure.

35.4 Vertical-tray fire and smoke-release test for cables with "-LSST1" marking

35.4.1 Each Type ITC cable that is surface marked "-LSST1" in accordance with 42.1(a) shall comply with the limits for smoke release and cable damage height stated in the Standard Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables, UL 1685, when sets of specimens as described in 35.4.2 are tested in either of the flame exposures described in UL 1685 with smoke measurements included.

42 Information on or in the Cable

42.1 a)

3) The designation "-LS" "-ST1" (signifying "limited smoke") added as a suffix immediately following the type letters for each cable construction that complies with the fire and smoke requirements in one of the alternative tests referenced in 35.4.1 of this Standard and described in the Standard for Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables, UL 1685. This marking is not required.

4) "HF" suffix to designate cable where all of the combustible materials used in the construction (e.g., insulation, fillers, jackets) are halogen-free in accordance with UL 2885, Outline of Investigation for Acid Gas, Acidity and Conductivity of Combusted Materials and Assessment of Halogens.

5) "LSHF" suffix to designate the cable that meets the "-HF" requirements and also complies with the requirements for low smoke when tested in accordance with IEC61034-2, Measurement of Smoke Density of Cables Burning Under Defined Conditions- Part 2: Test Procedure and Requirements.

BSR/UL 1660, Standard for Liquid-Tight Flexible Nonmetallic Conduit

1. Marking requirements for suitability for use in swimming pool corrosive environments

PROPOSAL

6.2 Package

6.2.1 The following information shall be legibly marked on a tag or adhesive label affixed to the reel or carton or printed or stenciled directly on the reel or carton.

- a) All of the information required in 6.1.3.
- b) The date of manufacture, or the dating period of manufacture. The dating period shall not exceed any three consecutive calendar months. The date or dating period may be abbreviated or coded.
- c) "Equipment grounding/bonding conductor required" or equivalent wording.
- d) For Type LFNC-A conduit, "Use fittings identified specifically for Type LFNC-A conduit" or equivalent wording.
- e) For Type LFNC-B conduit, "Use fittings identified for Type LFNC-B conduit" or equivalent wording.
- f) For Type LFNC-C conduit, "Use with _____ fittings only" where the fitting manufacturer's name or trademark is inserted in the blank space.
- g) For Type LFNC-B conduit spliced to make longer lengths, "Cut out the splices before use" or equivalent wording.
- h) "Suitable for use in swimming pool Corrosive Environments".

2. Method for determining the dimensions of the Outside Diameter (O.D.) for types LFNC-A (4.3.1) or LFNC-B

PROPOSAL

4.3.1.5 Compliance of Type LFNC-A conduit with the minimum and maximum outside diameters in Table 1 shall be determined when measured in accordance with ASTM D2122.

4.3.2.4 Compliance of Type LFNC-B conduit with the minimum and maximum outside diameters in Table 3 shall be determined when measured in accordance with ASTM D2122.

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