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American National Standards

Call for comment on proposals listed

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

Ordering Instructions for "Call-for-Comment" Listings

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

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

* Standard for consumer products

Comment Deadline: May 19, 2013

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

Addenda

BSR/ASHRAE Addendum 55p-201x, Thermal Environmental Conditions for Human Occupancy (addenda to ANSI/ASHRAE Standard 55-2010)

This proposed addenda aligns Section 5.3.4.2 (Draft) with the definition of average air speed that was clarified in proposed Addendum i.

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

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

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

Addenda

BSR/ASHRAE Addendum 55q-201x, Thermal Environmental Conditions for Human Occupancy (addenda to ANSI/ASHRAE Standard 55-2010)

This proposed addendum deletes Section 5.3.3.4 (Air Speed Measurement) for consistency with Draft Addendum 55i. The deleted section is mostly informative text. New definitions are added for "average air speed" and "average air temperature" to clarify how these commonly used terms apply to averages across the human body. Note that these definitions are also included in Draft Addendum 55n.

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

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

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

Addenda

BSR/ASHRAE/ASHE Addendum 170u-201x, Ventilation of Health Care Facilities (addenda to ANSI/ASHRAE/ASHE Standard 170-2008)

This proposed addendum clarifies note w to Table 7-1, Design Parameters.

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

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

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

Addenda

BSR/ASHRAE/ASHE Addendum 170y-201x, Ventilation of Health Care Facilities (addenda to ANSI/ASHRAE/ASHE Standard 170-2008)

This proposed addendum adds restrictions on the use of duct lining. These requirements are similar to those of the 2010 FGI Guidelines for the Design and Construction of Health Care Facilities, but have been clarified.

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

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

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

Addenda

BSR/ASHRAE/ASHE Addendum 170z-201x, Ventilation of Health Care Facilities (addenda to ANSI/ASHRAE/ASHE Standard 170-2008)

This proposed addendum clarifies requirements for an Emergency Department examination/treatment room. The function of the Emergency Department examination/treatment room is described in FGI-2010, Paragraph 2.2-3.1.3.6.

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

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

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

Addenda

BSR/ASHRAE/ASHE Addendum 170ab-201x, Ventilation of Health Care Facilities (addenda to ANSI/ASHRAE/ASHE Standard 170-2008)

This proposed addendum clarifies the Table 7-1 (Design Parameters) minimum requirements for Patient rooms. The Patient room table entry with footnote (s.) previously allowed 4 Minimum Total ACH for this space with the use of supplemental heating and/or cooling systems. The Patient room requirements have been clarified such that 4 Minimum Total ACH is the space requirement regardless of the use of supplemental heating and/or cooling systems. The last sentence of footnote (s.) was not revised by this addenda; it was relocated to a new footnote (x.) and reapplied to the same table entry for patient rooms.

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

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

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

Addenda

BSR/ASHRAE/IES Addendum ag to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This is the second public review draft of a proposed addendum to establish guidelines for claiming energy savings that result from reduced envelope infiltration in Appendix G.

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

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

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

Addenda

BSR/ASHRAE/IES Addendum ak to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum limits the scope of 6.5.4.1 to heating and cooling hydronic systems since 6.5.4.4 addresses condenser water systems, clarifies the text in the section, lowers the flow limit from 50% to 25%, removes the 10 horsepower size exception, and requires valve position reset for chilled hot water and hot water temperature for DDC systems.

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

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

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

Addenda

BSR/ASHRAE/IES Addendum ba to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

In response to comments on the first public review, this addendum has been modified to only require HVAC system operation switches on doors, rather than doors and windows.

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

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

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

Addenda

BSR/ASHRAE/IES Addendum bl to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

Chapter 11 and Appendix G require the user to remove fan energy from equipment where the fan energy is included in the energy efficiency rating of the equipment. A method for removing the fan energy was not previously included in the standard. This addendum includes a methodology for removing the fan energy from packaged equipment efficiency ratings.

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

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

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

Addenda

BSR/ASHRAE/IES Addendum dp to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum modifies language introduced in addendum ar to 90.1-2010, specifically it revises the definition of "walk-in cooler" to match the temperature definitions in federal regulations.

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

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

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

Addenda

BSR/ASHRAE/IES Addendum dq to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum is in response to a CMP. The economic analysis did not extend above 24' pipe size, so requirements for larger pipes have been eliminated.

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

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

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

Addenda

BSR/ASHRAE/IES Addendum dr to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum modifies the definition of building entrance for clarity.

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

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

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

Addenda

BSR/ASHRAE/IES Addendum dt to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum was generated in response to a continuous maintenance proposal to remove requirements to control lighting that is not part of the building permit to exempt some sign lighting in the lighting control wattage calculation.

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

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

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

Addenda

BSR/ASHRAE/IES Addendum du to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum requires water-side economizers for chilled water systems including non-fan systems such as radiant cooling or passive chilled beam systems and for systems with small individual chilled-water fan systems such as fan coils or chilled beams. Provisions are added to avoid implementations that result in excessive heat rejection energy.

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

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

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

Addenda

BSR/ASHRAE/IES Addendum dv to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

Since Section 6.5.4.1 requires most systems to be variable flow and since system flow rate for variable flow systems is more a function of valve demand than of how many pumps are on, arguably the second issue is more important, yet it is not addressed in the current standard. The first issue only needs be addressed for constant flow systems where pumps are staged with the chillers or boilers. This addendum revises the current wording accordingly. An exception is added for chiller plant pumps where it is possible that running fewer condenser water pumps can improve plant performance in cool weather.

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

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

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

Addenda

BSR/ASHRAE/IES Addendum dw to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

Electronic enthalpy switches are eliminated because they have been supplanted in the marketplace by better-performing and lower-cost switches that use superior fixed enthalpy plus fixed dry-bulb logic. The dewpoint high limit that was added in the 2004 version is also proposed to be deleted since does not make sense theoretically and did not perform well in our simulations. The addendum also adds tolerances to the high-limit change-over sensors, which are aligned with tolerances recently added to the Title 24 2013 standard

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

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

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

Addenda

BSR/ASHRAE/IES Addendum dx to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

At the January 2013 Dallas meeting, the SSPC 90.1 approved to send out for public reviews Addenda bm, co, and cr as 2nd PR-ISCs and a new Addendum dl for publication/public review While these addenda are out for public review, the changes reflected by Addenda co, cr, and dl are not reflected in the 2nd PR-ISC of Addendum bm, so this new addendum has been created to address those changes.

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

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

NASPO (North American Security Products Organization)

Revision

BSR/NASPO-SA-201x, Security Assurance Standard (revision of ANSI/NASPO-SA-2008)

This standard identifies security risks and specifies treatments that must be implemented to enable a secure operation to achieve Class III (Basic), Class II (High), or Class III (V.High) security assurance.

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

Send comments (with copy to psa@ansi.org) to: David Brown, (408) 765-1806 or 408-595-4544, david.a.brown@intel.com

NSF (NSF International)

Revision

BSR/NSF 14-201x (i48), Plastics Piping System Components and Related Materials (revision of ANSI/NSF 14-2013)

Issue 48 - This issue proposes the addition of QC table requirements for UL 1821 into NSF/ANSI 14.

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

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

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 44-201x, Standard for Safety for Thermoset-Insulated Wires and Cables (revision of ANSI/UL 44-2010)

(1) Proposed new edition of UL 44.

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

Send comments (with copy to psa@ansi.org) to: Camille Alma, (631) 546-2688, Camille.A.Alma@ul.com

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 83-201x, Standard for Safety for Thermoplastic-Insulated Wires and Cables (revision of ANSI/UL 83-2008)

(1) Proposed new edition of UL 83.

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

Send comments (with copy to psa@ansi.org) to: Camille Alma, (631) 546-2688, Camille.A.Alma@ul.com

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 153-201X, Standard for Safety for Portable Electric Luminaires (revision of ANSI/UL 153-2011)

The following changes in requirements to the Standard for Portable Electric Luminaires, UL 153, are being proposed: (1) Revise extension cord types in wet locations in 193.2.

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

Send comments (with copy to psa@ansi.org) to: Heather Sakellariou, (847) 664-2346, Heather.Sakellariou@ul.com

UL (Underwriters Laboratories, Inc.)**Revision**

BSR/UL 448-201x, Standard for Safety for Centrifugal Stationary Pumps for Fire-Protection Service (revision of ANSI/UL 448-2011)

The following changes in requirements to UL 448 are being proposed: (1) Dimensional requirements for pump flanges and threaded connections; (2) Clarification and updating of requirements related to pump construction, performance testing and marking; and (3) New nameplate fastener material requirements.

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

Send comments (with copy to psa@ansi.org) to: Raymond Suga, (631) 546-2593, raymond.m.suga@ul.com

UL (Underwriters Laboratories, Inc.)**Revision**

BSR/UL 1042-201x, Standard for Safety for Electric Baseboard Heaters (revision of ANSI/UL 1042-2013)

(1) Correction to paragraph 22.7; (2) Alternative Temperature Test material.

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

Send comments (with copy to psa@ansi.org) to: Mitchell Gold, (847) 664-2850, Mitchell.Gold@ul.com

UL (Underwriters Laboratories, Inc.)**Revision**

BSR/UL 2021-201x, Standard for Safety for Fixed and Location-Dedicated Electric Room Heaters (revision of ANSI/UL 2021-2013)

(1) Correction to paragraph 28.20; (2) Miscellaneous revisions to sections covering warning markings, the Alarm Endurance Test, maximum acceptable temperature rises, Rain Test requirements, and extension cord requirements; and (3) Alternative Temperature Test material.

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

Send comments (with copy to psa@ansi.org) to: Mitchell Gold, (847) 664-2850, Mitchell.Gold@ul.com

UL (Underwriters Laboratories, Inc.)**Revision**

BSR/UL 2200-201x, Standard for Safety for Stationary Engine Generator Assemblies (revision of ANSI/UL 2200-2011)

(1) Proposed option to provide the marking regarding the requirements for a stationary engine generator assembly that is shipped with a partially installed or incomplete exhaust system in the instruction manual.

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

Send comments (with copy to psa@ansi.org) to: Elizabeth Sheppard, (847) 664-3276, Elizabeth.H.Sheppard@ul.com

UL (Underwriters Laboratories, Inc.)**Revision**

BSR/UL 2353-201x, Standard for Safety for Single- and Multi-Layer Insulated Winding Wire (revision of ANSI/UL 2353-2012a)

The intent of this proposal is to downgrade the testing voltage of the Spark Test.

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

Send comments (with copy to psa@ansi.org) to: Derrick Martin, (408) 754-6656, Derrick.L.Martin@ul.com

Comment Deadline: June 3, 2013**AAMI (Association for the Advancement of Medical Instrumentation)****New National Adoption**

BSR/AAMI/IEC 60601-1-08-201x, Medical electrical equipment - Part 1-8: General requirements for basic safety and essential performance - Collateral Standard: General requirements, tests and guidance for alarm systems in medical electrical equipment and medical electrical systems (identical national adoption of IEC 60601-1-08:2006 and IEC 60601-1-08:2006/A1:2012)

This standard applies to the basic safety and essential performance of medical electrical equipment and medical electrical systems, hereafter referred to as ME equipment and ME systems. This collateral standard specifies requirements for alarm systems and alarm signals in ME equipment and ME systems. It also provides guidance for the application of alarm systems.

Single copy price: Free

Order from: www.aami.org

Send comments (with copy to psa@ansi.org) to: Jennifer Moyer, (703) 253-8274, jmoyer@aami.org

ABYC (American Boat and Yacht Council)**New Standard**

BSR/ABYC A-6-201x, Refrigeration and Air Conditioning Equipment (new standard)

This standard is a guide for the design, construction, and installation of refrigeration and air conditioning systems on boats.

Single copy price: 25.00 (ABYC members); \$50.00 (nonmembers)

Obtain an electronic copy from: www.abycinc.org

Order from: Helen Koepper, (410) 990-4460, hkoepper@abycinc.org

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

ABYC (American Boat and Yacht Council)**New Standard**

BSR/ABYC A-7-201x, Liquid and Solid Fueled Boat Heating Systems (new standard)

This standard is a guide for the design, construction, and installation of permanently installed boat accommodation space-heating units and systems.

Single copy price: 25.00 (ABYC members); \$50.00 (nonmembers)

Obtain an electronic copy from: www.abycinc.org

Order from: Helen Koepper, (410) 990-4460, hkoepper@abycinc.org

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

AIAA (American Institute of Aeronautics and Astronautics)

New Standard

BSR/AIAA S-115-201X, Low Earth Orbit Spacecraft Charging Design Standard Requirement and Associated Handbook (new standard)

This document and information handbook presents an overview of the current understanding of the various plasma interactions that can result when a high-voltage system is operated in the Earth's ionosphere. It references common design practices that have exacerbated plasma interactions in the past and recommends standard requirements and practices to eliminate or mitigate such reactions.

Single copy price: Free

Obtain an electronic copy from: amyb@aiaa.org

Order from: Amy Barrett, 703-264-7546, AmyB@aiaa.org

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

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

Revision

BSR/APCO ANS 1.103.2-201x, Wireless 9-1-1 Deployment & Management Effective Practices Guide (revision and redesignation of ANSI/APCO ANS 1.103.1-2008)

Designed to increase the Public Safety Answering Point (PSAP) manager's understanding of the technology application and the ability to better manage wireless calls, as well as public and responder expectations.

Single copy price: Free

Obtain an electronic copy from: mcduffie@apcointl.org

Order from: Crystal McDuffie, (919) 625-6864, mcduffie@apcointl.org; standards@apcointl.org

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

ASABE (American Society of Agricultural and Biological Engineers)

Revision

BSR/ASAE S279.17 MONYEAR-201x, Lighting and Marking of Agricultural Equipment on Highways (revision and redesignation of ANSI/ASAE S279.16 -2012)

This Standard provides specifications for lighting and marking of agricultural equipment whenever such equipment is operating or is traveling on a highway.

Single copy price: \$55.00

Obtain an electronic copy from: vangilder@asabe.org

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

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

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

Addenda

BSR/ASHRAE Addendum 55o-201x, Thermal Environmental Conditions for Human Occupancy (addenda to ANSI/ASHRAE Standard 55-2010)

This proposed addendum clarifies the normative language that appears in Section 7 (Evaluation of the Thermal Environment) of the body of the Standard. This revised Section 7 provides standardized measurement methods for the evaluation of comfort conditions in existing buildings. The intention is to assist users of the Standard in understanding what is actually happening in buildings. Use of standardized methods allows better comparison among different buildings and in the same building under a variety of conditions. The methods have also been simplified when compared to previous versions of Standard 55.

Single copy price: \$35.00

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

Order from: standards.section@ashrae.org

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

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

Addenda

BSR/ASHRAE Addendum at to ANSI/ASHRAE Standard 135-2012, BACnet - A Data Communication Protocol for Building Automation and Control Networks (addenda to ANSI/ASHRAE Standard 135-2012)

This addendum adds an Interface_Value Property, which allows a controller to expose the actual value of the physical input or output in a standard manner.

Single copy price: \$35.00

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

Order from: standards.section@ashrae.org

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

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

Addenda

BSR/ASHRAE Addendum au to ANSI/ASHRAE Standard 135-2012, BACnet - A Data Communication Protocol for Building Automation and Control Networks (addenda to ANSI/ASHRAE Standard 135-2012)

This addendum clarifies authentication factor value encoding and also clarifies coercion support requirements.

Single copy price: \$35.00

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

Order from: standards.section@ashrae.org

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

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

Addenda

BSR/ASHRAE Addendum av to ANSI/ASHRAE Standard 135-2012, BACnet - A Data Communication Protocol for Building Automation and Control Networks (addenda to ANSI/ASHRAE Standard 135-2012)

The purpose of this addendum is to deprecate execution of GetAlarmSummary since addendum af of ASHRAE 135-2010 made the GetEventInformation service execution required for all devices that support event reporting. The addendum also deprecates execution of GetEnrollmentSummary because this complex service does not provide enough information to acknowledge an event.

Single copy price: \$35.00

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

Order from: standards.section@ashrae.org

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

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

Addenda

BSR/ASHRAE Addendum aw to ANSI/ASHRAE Standard 135-2012, BACnet - A Data Communication Protocol for Building Automation and Control Networks (addenda to ANSI/ASHRAE Standard 135-2012)

The purpose of this addendum is to extend the CHANGE_OF_STATE event algorithm for all discrete types; add a new event algorithm, CHANGE_OF_DISCRETE_VALUE; add a new fault algorithm, FAULT_OUT_OF_RANGE; extend the Loop Object Type to support specific low and high error limits; add the ability to report faults to date- and time-related value objects; and add the ability to report faults to the Command, Device, and Notification class objects.

Single copy price: \$35.00

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

Order from: standards.section@ashrae.org

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

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

Revision

BSR/ASHRAE Standard 152-200x, Method of Test for Determining the Design and Seasonal Efficiencies of Residential Thermal Distribution Systems (revision of ANSI/ASHRAE Standard 152P-2004)

This revision of Standard 152-2004 prescribes a method of test to determine the efficiency of space heating and/or cooling thermal distribution systems under seasonal and design conditions. The objective is to facilitate annual energy calculations and heating and cooling equipment capacity calculations.

Single copy price: \$35.00

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

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

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

Withdrawal

ANSI/ASHRAE/IESNA Addendum 90.1cx-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (withdrawal of ANSI/ASHRAE/IESNA Addendum 90.1cx-2010)

Originally, addendum bb to 90.1 required a 30% Window to Wall Ratio (WWR). This language allowed an exception for 40% window wall area path within the prescriptive Tables 5.5-1 through 5.5-8, provided continuous dimming was present. Addendum cx was originally approved pending publication of addendum bb, which contained the 30% WWR requirement at the time. After appeals to addendum bb were upheld, the 30% WWR requirement was increased to 40%, and this addendum is being recommended for withdrawal.

Single copy price: \$35.00

Order from: Free download at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

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DASMA (Door and Access Systems Manufacturers Association)

Revision

BSR/DASMA 115-201x, Standard Method for Testing Sectional Garage Doors, Rolling Doors and Flexible Doors: Determination of Structure Performance Under Missile Impact and Cyclic Wind Pressure (revision of ANSI/DASMA 115-2005)

This test method describes the determination of sectional garage doors, rolling doors, and flexible doors impacted by missiles and subsequently to cyclic static pressure differentials.

Single copy price: Free

Obtain an electronic copy from: dasma@dasma.com

Order from: Christopher Johnson, (216) 241-7333, cjohnson@thomasamc.com

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

ECA (Electronic Components Association)

New Standard

BSR/EIA 974-201x, Specification for Mini Multilane 10 Gb/s 4X Common Elements Connectors (new standard)

This specification defines the terminology and physical requirements for the mating interface and physical characteristics of the Mini Multilane Connector. The dimensions specified apply to the various sizes.

Single copy price: \$60.00

Obtain an electronic copy from: global.ihs.com (877)413-5184

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

Send comments (with copy to psa@ansi.org) to: Edward Mikoski, (571) 323-0253, emikoski@eciaonline.org

ECA (Electronic Components Association)**New Standard**

BSR/EIA 975-201x, Specification for Mini Multilane 10 Gb/s 4X Unshielded Receptacle Shell and Plug (new standard)

This specification defines the plug, guide/strain relief shell, and latching requirements for the Mini Multilane Unshielded Shell and Plug Connectors.

Single copy price: \$60.00

Obtain an electronic copy from: global.ihs.com (877) 413-5184

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

Send comments (with copy to psa@ansi.org) to: Edward Mikoski, (571) 323-0253, emikoski@eciaonline.org

ECA (Electronic Components Association)**New Standard**

BSR/EIA 976-201x, Specification for Mini Multilane 10 Gb/s 4X Shielded Receptacle Shell and Plug (new standard)

This specification defines the plug, guide/strain relief shell, and latching requirements for the Mini Multilane Shielded Shell and Plug Connectors.

Single copy price: \$60.00

Obtain an electronic copy from: global.ihs.com (877) 413-5184

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

Send comments (with copy to psa@ansi.org) to: Edward Mikoski, (571) 323-0253, emikoski@eciaonline.org

HI (Hydraulic Institute)**Revision**

BSR/HI 2.1-2.2-201x, Rotodynamic Vertical Pumps of Radial, Mixed and Axial Flow Types for Nomenclature and Definitions (revision of ANSI/HI 2.1-2.2-2008)

This standard is for types, nomenclature, and definitions of vertical turbine, mixed flow, axial flow vertical diffuser, submersible motor deepwell and short-set pumps, commonly defined as vertically suspended types [VS0], [VS1], [VS2], [VS3], [VS6], [VS7], and [VS8], as well as vertical overhung impeller types [VS4] and [VS5] that are driven by vertical electric motors or horizontal engines with right-angle gears.

Single copy price: \$85.00

Obtain an electronic copy from: kanderson@pumps.org

Order from: Karen Anderson, (973) 267-9700 Ext 123, kanderson@pumps.org

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HI (Hydraulic Institute)**Revision**

BSR/HI 2.4-201x, Vertical Pumps for Installation, Operation and Maintenance (revision of ANSI/HI 2.4-2008)

This committee shall limit its activity to: (A) Vertical, diffuser, deep-well pumps [VS1]; (B) Vertical, diffuser, short-set pumps [VS1] & [VS3]; (C) Vertical, diffuser, can-mounted pumps [VS6]; (D) Vertical, diffuser, submersible, deep-well pumps [VS0]; (E) Vertical, diffuser, submersible, short-set pumps [VS0]; (F) Vertical, diffuser, double-casing, inline, floor-mounted [VS8]; (G) Vertical, volute, double-suction, wet-pit [VS2]; (H) Vertical, volute, double-suction, can-type [VS7]; and (I) Vertical, volute, multi-stage axial split, can-type [VS7-1].

Single copy price: \$70.00

Obtain an electronic copy from: kanderson@pumps.org

Order from: Karen Anderson, (973) 267-9700 Ext 123, kanderson@pumps.org

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

HI (Hydraulic Institute)**Revision**

BSR/HI 7.1-7.5-201x, Controlled Volume Metering Pumps for Nomenclature, Definitions, Application, and Operation (revision of ANSI/HI 7.1-7.5-2006)

The Controlled Volume Metering Pump Section will limit its activity to reciprocating positive displacement metering pumps, including but not limited to the following: (A) Hydraulic coupled disc diaphragm; (B) Hydraulic coupled tubular diaphragm; (C) Mechanical coupled disc diaphragm; (D) Pack piston; and (E) Plunger. Technical documents developed shall include, but are not limited to: types and nomenclature; definitions; design and application; installation; operation and maintenance; and test.

Single copy price: \$70.00

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Order from: Karen Anderson, (973) 267-9700 Ext 123, kanderson@pumps.org

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

ITI (INCITS) (InterNational Committee for Information Technology Standards)**New National Adoption**

INCITS/ISO/IEC 9594-1:2008, Information technology - Open Systems Interconnection - The Directory: Overview of concepts, models and services (identical national adoption of ISO/IEC 9594-1:2008 and revision of INCITS/ISO/IEC 9594-1:2005)

The Directory provides the directory capabilities required by OSI applications, OSI management processes, other OSI layer entities, and telecommunications services.

Single copy price: \$126.00

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

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

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

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

New National Adoption

INCITS/ISO/IEC 9594-2:2008, Information technology - Open Systems Interconnection - The Directory: Models (identical national adoption of ISO/IEC 9594-2:2008 and revision of INCITS/ISO/IEC 9594-2:2005)

The models defined in ISO/IEC 9594-2:2008 provide a conceptual and terminological framework for the other parts of ISO/IEC 9594, which define various aspects of the Directory.

Single copy price: \$285.00

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

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

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

New National Adoption

INCITS/ISO/IEC 9594-3:2008, Information technology - Open Systems Interconnection - The Directory: Abstract service definition (identical national adoption of ISO/IEC 9594-3:2008 and revision of INCITS/ISO/IEC 9594-3:2005)

ISO/IEC 9594-3:2008 defines in an abstract way the externally visible service provided by the Directory.

Single copy price: \$235.00

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

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

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

New National Adoption

INCITS/ISO/IEC 9594-4:2008, Information technology - Open Systems Interconnection - The Directory: Procedures for distributed operation (identical national adoption of ISO/IEC 9594-4:2008 and revision of INCITS/ISO/IEC 9594-4:2005)

ISO/IEC 9594-4:2008 specifies the behavior of DSAs taking part in the distributed Directory application. The allowed behavior has been designed so as to ensure a consistent service, given a wide distribution of the DIB across many DSAs.

Single copy price: \$250.00

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

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

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

New National Adoption

INCITS/ISO/IEC 9594-5:2008, Information technology - Open Systems Interconnection - The Directory: Protocol specifications (identical national adoption of ISO/IEC 9594-5:2008 and revision of INCITS/ISO/IEC 9594-5:2005)

ISO/IEC 9594-5:2008 specifies the Directory Access Protocol, the Directory System Protocol, the Directory Information Shadowing Protocol, and the Directory Operational Binding Management Protocol, fulfilling the abstract services specified in ISO/IEC 9594-3, ISO/IEC 9594-4, ISO/IEC 9594-9, and ISO/IEC 9594-2.

Single copy price: \$250.00

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

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

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

New National Adoption

INCITS/ISO/IEC 9594-6:2008, Information technology - Open Systems Interconnection - The Directory: Selected attribute types (identical national adoption of ISO/IEC 9594-6:2008 and revision of INCITS/ISO/IEC 9594-6:2005)

ISO/IEC 9594-6:2008 defines a number of attribute types and matching rules, which may be found useful across a range of applications of the Directory.

Single copy price: \$218.00

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

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

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

New National Adoption

INCITS/ISO/IEC 9594-7:2008, Information technology - Open Systems Interconnection - The Directory: Selected object classes (identical national adoption of ISO/IEC 9594-7:2008 and revision of INCITS/ISO/IEC 9594-7:2005)

ISO/IEC 9594-7:2008 defines a number of object classes and name forms that may be found useful across a range of applications of the Directory. The definition of an object class involves listing a number of attribute types that are relevant to objects of that class. The definition of a name form involves naming the object class to which it applies and listing the attributes to be used in forming names for objects of that class. These definitions are used by the administrative authority that is responsible for the management of the directory information.

Single copy price: \$135.00

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

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

New National Adoption

INCITS/ISO/IEC 9594-8:2008, Information technology - Open Systems Interconnection - The Directory: Public-key and attribute certificate frameworks (identical national adoption of ISO/IEC 9594-8:2008 and revision of INCITS/ISO/IEC 9594-8:2005)

ISO/IEC 9594-8:2008 addresses some of the security requirements in the areas of authentication and other security services through the provision of a set of frameworks upon which full services can be based.

Single copy price: \$285.00

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

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

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

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

New National Adoption

INCITS/ISO/IEC 9594-9:2008, Information technology - Open Systems Interconnection - The Directory: Replication (identical national adoption of ISO/IEC 9594-9:2008 and revision of INCITS/ISO/IEC 9594-9:2001)

ISO/IEC 9594-9:2008 specifies a shadow service that DSAs may use to replicate Directory information. The service allows Directory information to be replicated among DSAs to improve service to Directory users. The shadowed information is updated, using the defined protocol, thereby improving the service provided to users of the Directory.

Single copy price: \$157.00

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

New National Adoption

INCITS/ISO/IEC 9594-2:2008/Cor1:2011, Information technology - Open Systems Interconnection - The Directory: Models - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-2:2008/Cor1:2011)

Technical corrigendum 1 to ISO/IEC 9594-2:2008.

Single copy price: Free

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

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New National Adoption

INCITS/ISO/IEC 9594-2:2008/Cor2:2012, Information technology - Open Systems Interconnection - The Directory: Models - Technical Corrigendum 2 (identical national adoption of ISO/IEC 9594-2:2008/Cor2:2012)

Technical corrigendum 2 to ISO/IEC 9594-2:2008.

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New National Adoption

INCITS/ISO/IEC 9594-3:2008/Cor1:2011, Information technology - Open Systems Interconnection - The Directory: Abstract Service Definition - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-3:2008/Cor1:2011)

Technical Corrigendum 1 to ISO/IEC 9594-3:2008.

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New National Adoption

INCITS/ISO/IEC 9594-3:2008/Cor2:2012, Information technology - Open Systems Interconnection - The Directory: Abstract Service Definition - Technical Corrigendum 2 (identical national adoption of ISO/IEC 9594-3:2008/Cor2:2012)

Technical Corrigendum 2 to ISO/IEC 9594-3:2008.

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

New National Adoption

INCITS/ISO/IEC 9594-4:2008/Cor1:2011, Information technology - Open Systems Interconnection - The Directory: Procedures for distributed operation - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-4:2008/Cor1:2011)

Technical Corrigendum 1 to ISO/IEC 9594-4:2008.

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

New National Adoption

INCITS/ISO/IEC 9594-5:2008/Cor1:2011, Information technology - Open Systems Interconnection - The Directory: Protocol specifications - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-5:2008/Cor1:2011)

Technical Corrigendum 1 to ISO/IEC 9594-5:2008.

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New National Adoption

INCITS/ISO/IEC 9594-5:2008/Cor2:2012, Information technology - Open Systems Interconnection - The Directory: Protocol specifications - Technical Corrigendum 2 (identical national adoption of ISO/IEC 9594-5:2008/Cor2:2012)

Technical Corrigendum 2 to ISO/IEC 9594-5:2008.

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

New National Adoption

INCITS/ISO/IEC 9594-6:2008/Cor1:2011, Information technology - Open Systems Interconnection - The Directory: Selected attribute types - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-6:2008/Cor1:2011)

Technical Corrigendum 1 to ISO/IEC 9594-6:2008

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INCITS/ISO/IEC 9594-6:2008/Cor2:2012, Information technology - Open Systems Interconnection - The Directory: Selected attribute types - Technical Corrigendum 2 (identical national adoption of ISO/IEC 9594-6:2008/Cor2:2012)

Technical Corrigendum 2 to ISO/IEC 9594-6:2008.

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

New National Adoption

INCITS/ISO/IEC 9594-7:2008/Cor1:2012, Information technology - Open Systems Interconnection - The Directory: Selected object classes - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-7:2008/Cor1:2012)

Technical Corrigendum 1 to ISO/IEC 9594-7:2008.

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

New National Adoption

INCITS/ISO/IEC 9594-8:2008/Cor1:2011, Information technology - Open Systems Interconnection - The Directory: Public-key and attribute certificate frameworks - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-8:2008/Cor1:2011)

Technical Corrigendum 1 to ISO/IEC 9594-8:2008.

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New National Adoption

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

New National Adoption

INCITS/ISO/IEC 9594-9:2005/Cor1:2011, Information technology - Open Systems Interconnection - The Directory: Replication - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-9:2005/Cor1:2011)

Technical Corrigendum 1 to ISO/IEC 9594-9:2008.

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

New Standard

BSR INCITS 508-201x, Information technology - Storage Management - HBA - 2nd Generation (SM-HBA-2) (new standard)

A standard application programming interface (API) defines a scope within which, and a grammar by which, it is possible to write application software without attention to vendor-specific infrastructure behavior. This standard specifies a standard API the scope of which is management of Fibre Channel (FC) and Serial Access SCSI (SAS) HBAs, and the use of FC and SAS capabilities for discovery and management of the components of the respective fabric or domain.

Single copy price: \$30.00

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

Reaffirmation

INCITS/ISO 962-1974 (R201x), Implementation of the 7-bit coded character set and its 7-bit and 8-bit extensions on 9-track 12,7 mm (0.5 in) magnetic tape (reaffirmation of INCITS/ISO 962-1974 (R2008))

Specifies the representation of the 7-bit-code and its 7-bit and 8-bit extensions on an 9-track magnetic tape with a width of 12,7 mm (0,5 in).

Single copy price: \$30.00

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

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Reaffirmation

INCITS/ISO 2033-1983 (R201x), Information processing - Coding of machine readable characters for OCR & MICR (reaffirmation of INCITS/ISO 2033-1983 (R2008))

Defines the coded representation of printed characters recognized by reading equipment. Includes the fonts E 13 B; CMC 7; OCR-A; OCR-B. Assigns bit-patterns to characters recognized by reading equipment. This information is then given to the recipient by different media and can be used by printing devices. Single-font reader and multiple-font reader are considered as applications. References: ISO 646; 1004; 1073; 2022.

Single copy price: \$30.00

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

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Reaffirmation

INCITS/ISO 3275-1974 (R201x), Implementation of the 7-bit coded character set and its 7-bit and 8-bit extensions on 3,81 mm magnetic cassette for data interchange (reaffirmation of INCITS/ISO 3275-1974 (R2008))

Defines the implementation of the 7-bit coded character set and of its 7-bit and 8-bit extensions for the interchange of data on 3.81-mm magnetic tape cassette. References: ISO 646; 2022; 3407.

Single copy price: \$30.00

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

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Reaffirmation

INCITS/ISO 6586-1980 (R201x), Data processing Implementation of the ISO 7 - Bit and 8 - Bit Coded Character Sets on Punched Cards (reaffirmation of INCITS/ISO 6586-1980 (R2008))

Defines implementation of ISO 7-bit and 8-bit coded character sets on punched cards as well as the representation of 7-bit and 8-bit combinations on 12-row punched cards. This representation is derived from, and compatible with, the Hollorith Code. Ensures wide compatibility with existing punched card files. Intended for general interchange of information among data processing systems.

Single copy price: \$30.00

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

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Reaffirmation

INCITS/ISO 9036-1987 (R201x), Information processing - Arabic 7-bit coded character set for information interchange (reaffirmation of INCITS/ISO 9036-1987 (R2008))

A set of mandatory 120 characters is described with the coded representation. This set is intended for interchange of information using Arabic language and includes control characters for code extensions. Procedures for using these control characters are specified in ISO 2022. References: ISO 646; ISO 2022; Arab Standard ASMO 449.

Single copy price: \$30.00

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

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Reaffirmation

INCITS/ISO/IEC 646-1991 (R201x), Information technology - ISO 7-bit coded Character Set for Information Interchange (reaffirmation of INCITS/ISO/IEC 646-1991 (R2008))

Specifies a set of 128 control and graphic characters such as letters, digits and symbols with their coded representation. Applies to alphabets of the Latin script.

Single copy price: \$30.00

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

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Reaffirmation

INCITS/ISO/IEC 2022-1994 (R201x), Information technology - Character code structure and extension techniques (reaffirmation of INCITS/ISO/IEC 2022-1994 (R2008))

Cancels and replaces the third edition (1986). Specifies the structure of 8-bit codes and 7-bit codes which provide for the coding of character sets. The codes specified here are designed to be used for data that is processed sequentially in a forward direction. Use of these codes in strings of data that are processed in some other way, or that are included in data formatted for fixed-length record processing, may have undesirable results or may require additional special treatment to ensure correct interpretation.

Single copy price: \$30.00

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

Reaffirmation

INCITS/ISO/IEC 2375-2003 (R201x), Information technology - Procedure for registration of escape sequences and coded character sets (reaffirmation of INCITS/ISO/IEC 2375-2003 (R2008))

ISO/IEC 2375:2003 specifies the procedures to be followed for preparing, maintaining, and publishing a register of escape sequences and of the coded character sets they identify.

Single copy price: \$30.00

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

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Reaffirmation

INCITS/ISO/IEC 4873-1991 (R201x), 8-bit code for information interchange - structure and rules for implementation (reaffirmation of INCITS/ISO/IEC 4873-1991 (R2008))

Specifies an 8-bit code which is derived from, and compatible with, the 7-bit coded character set specified in ISO/IEC 646. The normative Annex A gives restrictions applicable to the C0 and C1 sets.

Single copy price: \$30.00

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

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Reaffirmation

INCITS/ISO/IEC 7350-1991 (R201x), Information Technology - Registration of repertoires of Graphic Characters from ISO/IEC 10367:1991 (reaffirmation of INCITS/ISO/IEC 7350-1991 (R2008))

Specifies the procedures to be followed in preparing, publishing, and maintaining a register of graphic characters. Annex A (Advisory Group) forms an integral part of this standard. Annex B (Forms for proposal) is for information only.

Single copy price: \$30.00

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

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Reaffirmation

INCITS/ISO/IEC 8859-11:2001, Information technology - 8-bit single-byte coded graphic character sets - Part 11: Latin/Thai alphabet character set (reaffirmation of INCITS/ISO/IEC 8859-11-2008)

This part of ISO/IEC 8859 specifies a set of 183 coded graphic characters identified as Latin/Thai alphabet. This set of coded graphic characters is intended for use in data and text processing applications and also for information interchange. The set contains graphic characters used for general purpose applications in typical office environments in at least the following languages: Thai, English, and Latin.

Single copy price: \$30.00

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

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Reaffirmation

INCITS/ISO/IEC 8859-1-1998 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 1: Latin Alphabet No. 1 (8-Bit ASCII) (Revision and Resignation of X3.134.2) (reaffirmation of INCITS/ISO/IEC 8859-1-1998 (R2008))

Specifies a set of 191 coded graphic characters identified as Latin alphabet No. 1. This set of coded graphic characters is intended for use in data- and text-processing applications and also for information interchange.

Single copy price: \$30.00

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

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Reaffirmation

INCITS/ISO/IEC 8859-4-1998 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 4: Latin alphabet No. 4 (reaffirmation of INCITS/ISO/IEC 8859-4-1998 (R2008))

This part of ISO/IEC 8859 specifies a set of 191 coded graphic characters identified as Latin alphabet No. 4. This set of coded graphic characters is intended for use in data- and text-processing applications and also for information interchange. The set contains graphic characters used for general purpose applications in typical office environments in at least the following languages: Danish, English, Estonian, Finnish, German, Greenlandic, Latin, Latvian, Lithuanian, Norwegian, Sami (but see Annex A.1, Notes), Slovene, and Swedish.

Single copy price: \$30.00

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

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Reaffirmation

INCITS/ISO/IEC 8859-7-2004 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 7: Latin/Greek alphabet (reaffirmation of INCITS/ISO/IEC 8859-7-2004 (R2008))

ISO/IEC 8859-7:2003 specifies a set of 188 coded graphic characters identified as Latin/Greek alphabet. This set of coded graphic characters is intended for use in data and text processing applications and also for information interchange. The set contains graphic characters used for general purpose applications in typical office environments in at least the following languages: English, Greek, and Latin.

Single copy price: \$30.00

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Reaffirmation

INCITS/ISO/IEC 8859-9-2008 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 9: Latin alphabet No. 5 (reaffirmation of INCITS/ISO/IEC 8859-9-2008)

This part of ISO/IEC 8859 specifies a set of 191 coded graphic characters identified as Latin alphabet No. 5. This set of coded graphic characters is intended for use in data and text processing applications and also for information interchange. The set contains graphic characters used for general purpose applications in typical office environments in at least the following languages: Albanian, Basque, Breton, Catalan, Danish, Dutch, English, Faroese, Finnish, French (with restrictions, see Annex A.1, Notes), Frisian, Galician, German, Greenlandic, Irish Gaelic (new orthography), Italian, Latin, Luxemburgish, Norwegian, Portuguese, Rhaeto-Romanic, Scottish Gaelic, Spanish, Swedish and Turkish.

Single copy price: \$30.00

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

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Reaffirmation

INCITS/ISO/IEC 8859-10-1998 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 10: Latin alphabet No. 6 (reaffirmation of INCITS/ISO/IEC 8859-10-1998 (R2008))

This part of ISO/IEC 8859 specifies a set of 191 coded graphic characters identified as Latin alphabet No. 6. This set of coded graphic characters is intended for use in data and text processing applications and also for information interchange. The set contains graphic characters used for general purpose applications in typical office environments in at least the following languages: Danish, English, Estonian, Faroese, Finnish, German, Greenlandic, Icelandic, Irish Gaelic (new orthography), Latin, Lithuanian, Norwegian, Sami (but see Annex A.1, Notes), Slovene and Swedish.

Single copy price: \$30.00

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

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

Reaffirmation

INCITS/ISO/IEC 8859-13-2008 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 13: Latin Alphabet No. 7 (reaffirmation of INCITS/ISO/IEC 8859-13-2008)

This part of ISO/IEC 8859 specifies a set of 191 coded graphic characters identified as Latin alphabet No. 7. This set of coded graphic characters is intended for use in data and text processing applications and also for information interchange. The set contains graphic characters used for general purpose applications in typical office environments in at least the following languages: Danish, English, Estonian, Finnish, German, Latin, Latvian, Lithuanian, Norwegian, Polish, Slovene, and Swedish.

Single copy price: \$30.00

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

Reaffirmation

INCITS/ISO/IEC 8859-14-2008 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 14: Latin alphabet No. 8 (reaffirmation of INCITS/ISO/IEC 8859-14-2008)

This set of coded graphic characters is intended for use in data and text processing applications and also for information interchange. The set contains graphic characters used for general-purpose applications in typical office environments in at least the following languages: Albanian, Basque, Breton, Catalan, Cornish, Danish, Dutch, English, French (with restrictions, see Annex A.1, Notes), Frisian, Galician, German, Greenlandic, Irish Gaelic (old and new orthographies), Italian, Latin, Luxemburgish, Manx Gaelic, Norwegian, Portuguese, Rhaeto-Romanic, Scottish Gaelic, Spanish, Swedish, and Welsh.

Single copy price: \$30.00

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

Reaffirmation

INCITS/ISO/IEC 8859-15-2008 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 15: Latin Alphabet No.9 (reaffirmation of INCITS/ISO/IEC 8859-15-2008)

This set of coded graphic characters is intended for use in data and text processing applications and also for information interchange. The set contains graphic characters used for general purpose applications in typical office environments in at least the following languages: Albanian, Basque, Breton, Catalan, Danish, Dutch, English, Estonian, Faroese, Finnish, French, Frisian, Galician, German, Greenlandic, Icelandic, Irish Gaelic (new orthography), Italian, Latin, Luxemburgish, Norwegian, Portuguese, Rhaeto-Romanic, Scottish Gaelic, Spanish, and Swedish.

Single copy price: \$30.00

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

Reaffirmation

INCITS/ISO/IEC 10367-1991 (R201x), Information technology - Standardized coded graphic character sets for use in 8-bit codes (reaffirmation of INCITS/ISO/IEC 10367-1991 (R2008))

Specifies a unique coded character set for use as G0 set and a series of coded character sets of up to 96 characters for use as G1, G2, and G3 sets in versions of ISO/IEC 4873.

Single copy price: \$30.00

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

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Reaffirmation

INCITS/ISO/IEC 10538-1991 (R201x), Information technology - Control functions for text communication (reaffirmation of INCITS/ISO/IEC 10538-1991 (R2008))

Defines the control functions and their coded representations. Applies only to text made up of characters. Does not define any control functions required for controlling the process of communication. Annexes A, B, and C are for information only.

Single copy price: \$30.00

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

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

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

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

Withdrawal

INCITS/ISO/IEC 9594-10-2001, Information technology - Open Systems Interconnection - The Directory: Use of Systems Management for Administration of the Directory (withdrawal of INCITS/ISO/IEC 9594-10-2001)

This Recommendation | International Standard describes the requirements for Directory management, and analyses these requirements to identify those that may be realized by OSI Systems Management services (and protocols), those that are realized by Directory services (and protocols), and those that are realized by local means.

Single copy price: \$30.00

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

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

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

PMI (Project Management Institute)

Revision

BSR/PMI 08-004-201x, Organizational Project Management Maturity Model (OPM3 (R)) - Third Edition (revision of ANSI/PMI 08-004-2008)

The Organizational Project Management Maturity Model (OPM3 (R)) standard creates a framework within which organizations can examine and improve the pursuit of strategic objectives via best practices in organizational project, program, and portfolio management.

Single copy price: Free for draft

Obtain an electronic copy from: quynh.woodward@pmi.org

Order from: Quynh Woodward, 610-356-4600, quynh.woodward@pmi.org

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

SCTE (Society of Cable Telecommunications Engineers)

Revision

BSR/SCTE 93-201x, Test Method for Connector/Cable Twist (revision of ANSI/SCTE 93-2007)

This standard details the equipment and procedures required to measure the relative degree of twisting imparted to coaxial cables when installed into mainline plug connectors specifically.

Single copy price: \$50.00

Obtain an electronic copy from: standards@scte.org

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

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

UAMA (ASC B74) (Unified Abrasives Manufacturers' Association)

Reaffirmation

BSR B74.16-2002 (R201x), checking the Size of Diamond and Cubic Boron Nitride Abrasive Grain (reaffirmation of ANSI B74.16-2002 (R2007))

To establish a common basis for checking the size of diamond and cubic boron nitride (CBN) grain for use in the manufacture of diamond grinding wheels, saws and other industrial diamond products.

Single copy price: \$28.00

Obtain an electronic copy from: sab@wherryassoc.com

Order from: Sharyn Berki, (440) 899-0010, sab@wherryassoc.com

Send comments (with copy to psa@ansi.org) to: Jeffrey Wherry, (440) 899-0010, jjw@wherryassoc.com; djh@wherryassoc.com

UAMA (ASC B74) (Unified Abrasives Manufacturers' Association)

Reaffirmation

BSR B74.23-2002 (R201x), Measuring Relative Crystal Strengths of Diamond and Cubic Boron Nitride (reaffirmation of ANSI B74.23-2002 (R2007))

To establish an agreed method for checking the relative strengths of diamond and cubic boron nitrite (CBN) grains for use in the manufacture of saw blades and other industrial diamond products.

Single copy price: \$14.00

Obtain an electronic copy from: sab@wherryassoc.com

Order from: Sharyn Berki, (440) 899-0010, sab@wherryassoc.com

Send comments (with copy to psa@ansi.org) to: Jeffrey Wherry, (440) 899-0010, jjw@wherryassoc.com; djh@wherryassoc.com

UL (Underwriters Laboratories, Inc.)

New Standard

BSR/UL 379-201x, Standard for Safety for Power Units for Fountain, Swimming Pool, and Spa Luminaires (new standard)

Requesting ANSI approval of UL 379, which covers field-installed air-cooled transformers and dc-output power supplies intended to supply fountain, swimming pool, and spa luminaires, in accordance with Article 680 of the National Electrical Code, NFPA 70.

Single copy price: Contact comm2000 for pricing and delivery options

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

Order from: comm2000

Send comments (with copy to psa@ansi.org) to: Barbara Davis, (408) 754-6722, Barbara.J.Davis@ul.com

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 2225-201X, Standard for Safety for Cables and Cable-Fittings for Use in Hazardous (Classified) Locations (Proposal dated 04-19-13) (revision of ANSI/UL 2225-2011)

The proposed fourth edition of the Standard for Cables and Cable-Fittings for Use in Hazardous (Classified) Locations to add Type TC-ER-HL cable for use in Class I, Zone 1, as permitted by the 2014 NEC to the scope, along with editorial revisions and error corrections.

Single copy price: Contact comm2000 for pricing and delivery options

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

Order from: comm2000

Send comments (with copy to psa@ansi.org) to: Vickie Hinton, (919) 549-1851, vickie.t.hinton@ul.com

Comment Deadline: June 18, 2013

AAMI (Association for the Advancement of Medical Instrumentation)

Addenda

AAMI/ISO 11607-1:2006, A1-201x, Packaging for terminally sterilized medical devices - Part 1: Requirements for materials, sterile barrier systems, and packaging (addenda to ANSI/AAMI/ISO 11607-1:2006)

This amendment clarifies and corrects references, table and other areas in ISO 11607-1:2006.

Single copy price: 25.00; \$20.00 for AAMI members

Obtain an electronic copy from: <http://marketplace.aami.org/eseries/ScriptContent/Index.cfm>

Order from: www.aami.org

Send comments (with copy to psa@ansi.org) to: Hae Choe, (703) 253-8268, HChoe@aami.org; customerservice@aami.org

AAMI (Association for the Advancement of Medical Instrumentation)

Addenda

AAMI/ISO 11607-2:2006, A1-201x, Packaging for terminally sterilized medical devices - Part 2: Validation requirements for forming, sealing and assembly processes (addenda to ANSI/AAMI/ISO 11607-2:2006)

This amendment clarifies and corrects some references and makes other changes in ISO 11607-2:2006

Single copy price: 25.00; \$20.00 for AAMI members

Obtain an electronic copy from: <http://marketplace.aami.org/eseries/ScriptContent/Index.cfm>

Order from: www.aami.org

Send comments (with copy to psa@ansi.org) to: Hae Choe, (703) 253-8268, HChoe@aami.org; customerservice@aami.org

AGMA (American Gear Manufacturers Association)

Reaffirmation

BSR/AGMA 6135-2008 (R201x), Design, Rating and Application of Industrial Globoidal Wormgearing (Metric Edition) (reaffirmation of ANSI/AGMA 6135-2008)

This standard provides guidelines for the design, rating, and application of globoidal wormgearing, mounted with axes at a 90-degree angle. Specific definitions for globoidal wormgearing terms are presented, along with formulas for determining the geometric sizes of the major features for the worm and gear.

Single copy price: \$76.00

Order from: Charles Fischer, (703) 684-0211, fischer@agma.org; tech@agma.org

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

AGMA (American Gear Manufacturers Association)**Reaffirmation**

BSR/AGMA 9001-B97 (R201x), Flexible Couplings - Lubrication (reaffirmation of ANSI/AGMA 9001-B97 (R2008))

This standard provides information on lubrication of gear couplings, chain couplings and metallic grid couplings. Types of lubricants and lubrication methods and practices are included.

Single copy price: \$41.00

Order from: Charles Fischer, (703) 684-0211, fischer@agma.org; tech@agma.org

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

AGMA (American Gear Manufacturers Association)**Revision**

BSR/AGMA 6035-2002 (R201x), Design, Rating and Application of Industrial Globoidal Wormgearing (revision of ANSI/AGMA 6035-2002 (R2008))

This standard provides guidelines for the design, rating, and application of globoidal wormgearing, mounted with axes at a 90-degree angle. Specific definitions for globoidal wormgearing terms are presented, along with formulas for determining the geometric sizes of the major features for the worm and gear.

Single copy price: \$81.00

Order from: Charles Fischer, (703) 684-0211, fischer@agma.org; tech@agma.org

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

UL (Underwriters Laboratories, Inc.)**New National Adoption**

BSR/UL 60730-2-10-201X, Automatic Electrical Controls for Household and Similar Use; Part 2: Particular Requirements for Motor Starting Relays (identical national adoption of IEC 60730-2-10)

This part of IEC 60730 applies to controls for automatically controlling the starting windings of single phase motors associated with equipment for household and similar use. This standard applies to motor-starting relays using NTC or PTC thermistors, additional requirements for which are contained in Annex J. This standard also covers centrifugal switches intended to be integrated into motors. Such devices are tested with the intended motor as an integrated control.

Single copy price: Contact comm2000 for pricing and delivery options

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

Order from: comm2000

Send comments (with copy to psa@ansi.org) to: Alan McGrath, (847) 664-3038, alan.t.mcgrath@ul.com

UL (Underwriters Laboratories, Inc.)**New National Adoption**

BSR/UL 60947-4-1A-201x, Standard for Safety for Low-Voltage Switchgear and Controlgear - Part 4-1: Contactors and Motor-Starters - Electromechanical Contactors and Motor-Starters (national adoption of IEC 60947-4-1 with modifications and revision of ANSI/UL 60947-4-1A-2011)

(1) Proposed third edition of the Standard for Low-Voltage Switchgear and Controlgear - Part 4-1: Contactors and Motor-Starters - Electromechanical Contactors and Motor-Starters.

Single copy price: Contact comm2000 for pricing and delivery options

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

Order from: comm2000

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

UL (Underwriters Laboratories, Inc.)**New Standard**

BSR/UL 6703-201x, Standard for Safety for Connectors for Use in Photovoltaic Systems (new standard)

These requirements cover latching or locking type PV connectors either as a free connector (separate entity) or as a fixed connector (panel or bulkhead type) and rated 1000 V dc or less.

Single copy price: Contact comm2000 for pricing and delivery options

Order from: comm2000

Send comments (with copy to psa@ansi.org) to: Marcia Kawate, (408) 754-6743, Marcia.M.Kawate@ul.com

UL (Underwriters Laboratories, Inc.)**Revision**

BSR/UL 2158-201x, Standard for Safety for Electric Clothes Dryers (revision of ANSI/UL 2158-2009b)

(1) Adoption of the third edition of the Standard for Electric Clothes Dryers, UL 2158, which includes the following changes: (a) Modification of fire-containment requirements, (b) Addition of Cheesecloth reference to abnormal operation tests, (c) Addition of a flood test, (d) Addition of insulation resistance test method, (e) Addition of the option to use a tradename for manufacturer's identification, (f) Revisions to remove reference to obsolete flexible cord Types HS and HSO, (g) Revision of requirements for standard referenced for electric motors and motor overload protection, (h) Correction to requirements for cord replacement instructions, (i) Correction to requirements for bonding conductors of components or separate electrical enclosures, (j) Addition of requirements for thermistor-type devices used as temperature controls, (k) Clarification of requirements for nonfunctional parts, (l) Addition of requirements for polymeric materials in contact with or close proximity to live parts, (m) Addition of requirements for installation and user maintenance instructions for ungrounded parts and installation instructions for installation on a concrete floor, (n) Clarification of requirements for polarity of single-pole switches and automatic controls, (o) Correction to clause reference in 19.6.13, (p) Addition of neutral-ground link requirements, (q) Addition of supplement SA for the addition of smart enabled electric clothes dryer requirements, (r) Corrections and reformatting, (s) Editorial revisions which include: renumbering, updates to format, updating standard and code references, updating the standards referenced in Annex A; (2) Addition of a warning marking regarding dryer exhaust duct power ventilators.

Single copy price: Contact comm2000 for pricing and delivery options

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Send comments (with copy to psa@ansi.org) to: Elizabeth Sheppard, (847) 664-3276, Elizabeth.H.Sheppard@ul.com

Projects Withdrawn from Consideration

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)

BSR/ASAE D309.2-201x, Wet-Bulb Temperatures and Wet-Bulb Depressions (new standard)

ASTM (ASTM International)

BSR/ASTM WK31289-201x, Specification for Black Crosslinked Polyethylene (PEX) Line Pipe, Fittings and Joints for Oil and Gas Applications (new standard)

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

In accordance with clause 4.7.1 Periodic Maintenance of American National Standards of the ANSI Essential Requirements, the following American National Standards have not been reaffirmed or revised within the five-year period following approval as an ANS. Thus, they shall be withdrawn at the close of this 30-day public review notice in Standards Action.

ANSI/ANS 2.10-2003, Criteria for the Handling and Initial Evaluation of Records from Nuclear Power Plant Seismic Instrumentation

Call for Members (ANS Consensus Bodies)

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

AAMI (Association for the Advancement of Medical Instrumentation)

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

Contact: *Jennifer Moyer*

Phone: (703) 253-8274

Fax: (703) 276-0793

E-mail: jmoyer@aami.org

BSR/AAMI/IEC 60601-1-08-201x, Medical electrical equipment - Part 1 -8: General requirements for basic safety and essential performance - Collateral Standard: General requirements, tests and guidance for alarm systems in medical electrical equipment and medical electrical systems (identical national adoption of IEC 60601-1-08:2006 and IEC 60601-1-08:2006/A1:2012)

AMCA (Air Movement and Control Association)

Office: 30 West University Drive
Arlington Heights, IL 60004-1893

Contact: *John Pakan*

Phone: (847) 704-6295

Fax: (847) 253-0088

E-mail: jpakan@amca.org

BSR/AMCA 510-201x, Methods of Testing Heavy Duty Dampers for Rating (revision of ANSI/AMCA 510-2004 (R2009))

BSR/AMCA 520-2009 (R201x), Laboratory Methods for Testing Actuators (reaffirmation of ANSI/AMCA 520-2009)

BSR/AMCA 520-2009 (R201x), Laboratory Methods for Testing Actuators (reaffirmation of ANSI/AMCA 520-2009)

DASMA (Door and Access Systems Manufacturers Association)

Office: 1300 Sumner Avenue
Cleveland, OH 44115-2851

Contact: *Christopher Johnson*

Phone: (216) 241-7333

Fax: (216) 241-0105

E-mail: cjohnson@thomasamc.com

BSR/DASMA 115-201x, Standard Method for Testing Sectional Garage Doors, Rolling Doors and Flexible Doors: Determination of Structure Performance Under Missile Impact and Cyclic Wind Pressure (revision of ANSI/DASMA 115-2005)

HI (Hydraulic Institute)

Office: 6 Campus Drive, 1st Fl North
Parsippany, NJ 07054

Contact: *Karen Anderson*

Phone: (973) 267-9700 Ext 123

Fax: (973) 267-9055

E-mail: kanderson@pumps.org

BSR/HI 2.1-2.2-201x, Rotodynamic Vertical Pumps of Radial, Mixed and Axial Flow Types for Nomenclature and Definitions (revision of ANSI/HI 2.1-2.2-2008)

BSR/HI 2.4-201x, Vertical Pumps for Installation, Operation and Maintenance (revision of ANSI/HI 2.4-2008)

BSR/HI 7.1-7.5-201x, Controlled Volume Metering Pumps for Nomenclature, Definitions, Application, and Operation (revision of ANSI/HI 7.1-7.5-2006)

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

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

Contact: *Rachel Porter*

Phone: 202-626-5741

Fax: 202-638-4922

E-mail: rporter@itic.org

BSR INCITS 508-201x, Information technology - Storage Management - HBA - 2nd Generation (SM-HBA-2) (new standard)

BSR INCITS 528-201x, Information technology - Common Building Blocks Specification (new standard)

BSR/INCITS 529-201x, Information technology - ATA/ATAPI Command Set - 4 (ACS-4) (new standard)

INCITS/ISO 962-1974 (R201x), Implementation of the 7-bit coded character set and its 7-bit and 8-bit extensions on 9-track 12,7 mm (0.5 in) magnetic tape (reaffirmation of INCITS/ISO 962-1974 (R2008))

INCITS/ISO 2033-1983 (R201x), Information processing - Coding of machine readable characters for OCR & MICR (reaffirmation of INCITS/ISO 2033-1983 (R2008))

INCITS/ISO 3275-1974 (R201x), Implementation of the 7-bit coded character set and its 7-bit and 8-bit extensions on 3,81 mm magnetic cassette for data interchange (reaffirmation of INCITS/ISO 3275-1974 (R2008))

- INCITS/ISO 6586-1980 (R201x), Data processing Implementation of the ISO 7 - Bit and 8 - Bit Coded Character Sets on Punched Cards (reaffirmation of INCITS/ISO 6586-1980 (R2008))
- INCITS/ISO 9036-1987 (R201x), Information processing - Arabic 7-bit coded character set for information interchange (reaffirmation of INCITS/ISO 9036-1987 (R2008))
- INCITS/ISO/IEC 646-1991 (R201x), Information technology - ISO 7-bit coded Character Set for Information Interchange (reaffirmation of INCITS/ISO/IEC 646-1991 (R2008))
- INCITS/ISO/IEC 2022-1994 (R201x), Information technology - Character code structure and extension techniques (reaffirmation of INCITS/ISO/IEC 2022-1994 (R2008))
- INCITS/ISO/IEC 2375-2003 (R201x), Information technology - Procedure for registration of escape sequences and coded character sets (reaffirmation of INCITS/ISO/IEC 2375-2003 (R2008))
- INCITS/ISO/IEC 2382-17:1999, Information technology - Vocabulary - Part 17: Databases (identical national adoption of ISO/IEC 2382-17:1999 and revision of INCITS/ISO/IEC 2382-17-1996 (R2011))
- INCITS/ISO/IEC 4873-1991 (R201x), 8-bit code for information interchange - structure and rules for implementation (reaffirmation of INCITS/ISO/IEC 4873-1991 (R2008))
- INCITS/ISO/IEC 7350-1991 (R201x), Information Technology - Registration of repertoires of Graphic Characters from ISO/IEC 10367:1991 (reaffirmation of INCITS/ISO/IEC 7350-1991 (R2008))
- INCITS/ISO/IEC 8859-11:2001, Information technology - 8-bit single-byte coded graphic character sets - Part 11: Latin/Thai alphabet character set (reaffirmation of INCITS/ISO/IEC 8859-11-2008)
- INCITS/ISO/IEC 8859-1-1998 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 1: Latin Alphabet No. 1 (8-Bit ASCII) (Revision and Resignation of X3.134.2) (reaffirmation of INCITS/ISO/IEC 8859-1-1998 (R2008))
- INCITS/ISO/IEC 8859-4-1998 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 4: Latin alphabet No. 4 (reaffirmation of INCITS/ISO/IEC 8859-4-1998 (R2008))
- INCITS/ISO/IEC 8859-7-2004 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 7: Latin/Greek alphabet (reaffirmation of INCITS/ISO/IEC 8859-7-2004 (R2008))
- INCITS/ISO/IEC 8859-9-2008 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 9: Latin alphabet No. 5 (reaffirmation of INCITS/ISO/IEC 8859-9-2008)
- INCITS/ISO/IEC 8859-10-1998 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 10: Latin alphabet No. 6 (reaffirmation of INCITS/ISO/IEC 8859-10-1998 (R2008))
- INCITS/ISO/IEC 8859-13-2008 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 13: Latin Alphabet No. 7 (reaffirmation of INCITS/ISO/IEC 8859-13-2008)
- INCITS/ISO/IEC 8859-14-2008 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 14: Latin Alphabet No. 8 (reaffirmation of INCITS/ISO/IEC 8859-14-2008)
- INCITS/ISO/IEC 8859-15-2008 (R201x), Information technology - 8-bit single-byte coded graphic character sets - Part 15: Latin Alphabet No. 9 (reaffirmation of INCITS/ISO/IEC 8859-15-2008)
- INCITS/ISO/IEC 9594-1:2008, Information technology - Open Systems Interconnection - The Directory: Overview of concepts, models and services (identical national adoption of ISO/IEC 9594-1:2008 and revision of INCITS/ISO/IEC 9594-1:2005)
- INCITS/ISO/IEC 9594-2:2008, Information technology - Open Systems Interconnection - The Directory: Models (identical national adoption of ISO/IEC 9594-2:2008 and revision of INCITS/ISO/IEC 9594-2:2005)
- INCITS/ISO/IEC 9594-3:2008, Information technology - Open Systems Interconnection - The Directory: Abstract service definition (identical national adoption of ISO/IEC 9594-3:2008 and revision of INCITS/ISO/IEC 9594-3:2005)
- INCITS/ISO/IEC 9594-4:2008, Information technology - Open Systems Interconnection - The Directory: Procedures for distributed operation (identical national adoption of ISO/IEC 9594-4:2008 and revision of INCITS/ISO/IEC 9594-4:2005)
- INCITS/ISO/IEC 9594-5:2008, Information technology - Open Systems Interconnection - The Directory: Protocol specifications (identical national adoption of ISO/IEC 9594-5:2008 and revision of INCITS/ISO/IEC 9594-5:2005)
- INCITS/ISO/IEC 9594-6:2008, Information technology - Open Systems Interconnection - The Directory: Selected attribute types (identical national adoption of ISO/IEC 9594-6:2008 and revision of INCITS/ISO/IEC 9594-6:2005)
- INCITS/ISO/IEC 9594-7:2008, Information technology - Open Systems Interconnection - The Directory: Selected object classes (identical national adoption of ISO/IEC 9594-7:2008 and revision of INCITS/ISO/IEC 9594-7:2005)
- INCITS/ISO/IEC 9594-8:2008, Information technology - Open Systems Interconnection - The Directory: Public-key and attribute certificate frameworks (identical national adoption of ISO/IEC 9594-8:2008 and revision of INCITS/ISO/IEC 9594-8:2005)
- INCITS/ISO/IEC 9594-9-2008, Information technology - Open Systems Interconnection - The Directory: Replication (identical national adoption of ISO/IEC 9594-9:2005)
- INCITS/ISO/IEC 9594-10-2001, Information technology - Open Systems Interconnection - The Directory: Use of systems management for administration of the Directory (identical national adoption of ISO/IEC 9594-10)
- INCITS/ISO/IEC 9594-2:2008/Cor1:2011, Information technology - Open Systems Interconnection - The Directory: Models - Corrigendum 1 (identical national adoption of ISO/IEC 9594-2:2008/Cor1:2011)
- INCITS/ISO/IEC 9594-2:2008/Cor2:2012, Information technology - Open Systems Interconnection - The Directory: Models - Technical Corrigendum 2 (identical national adoption of ISO/IEC 9594-2:2008/Cor2:2012)

INCITS/ISO/IEC 9594-3:2008/Cor1:2011, Information technology - Open Systems Interconnection - The Directory: Abstract service definition - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-3:2008/Cor1:2011)

INCITS/ISO/IEC 9594-3:2008/Cor2:2012, Information technology - Open Systems Interconnection - The Directory: Abstract service definition - Technical Corrigendum 2 (identical national adoption of ISO/IEC 9594-3:2008/Cor2:2012)

INCITS/ISO/IEC 9594-4:2008/Cor1:2011, Information technology - Open Systems Interconnection - The Directory: Procedures for distributed operation - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-4:2008/Cor1:2011)

INCITS/ISO/IEC 9594-5:2008/Cor1:2011, Information technology - Open Systems Interconnection - The Directory: Protocol specifications - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-5:2008/Cor1:2011)

INCITS/ISO/IEC 9594-5:2008/Cor2:2012, Information technology - Open Systems Interconnection - The Directory: Protocol specifications - Technical Corrigendum 2 (identical national adoption of ISO/IEC 9594-5:2008/Cor2:2012)

INCITS/ISO/IEC 9594-6:2008/Cor1:2011, Information technology - Open Systems Interconnection - The Directory: Selected attribute types - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-6:2008/Cor1:2011)

INCITS/ISO/IEC 9594-6:2008/Cor2:2012, Information technology - Open Systems Interconnection - The Directory: Selected attribute types - Technical Corrigendum 2 (identical national adoption of ISO/IEC 9594-6:2008/Cor2:2012)

INCITS/ISO/IEC 9594-7:2008/Cor1:2012, Information technology - Open Systems Interconnection - The Directory: Selected object classes - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-7:2008/Cor1:2012)

INCITS/ISO/IEC 9594-8:2008/Cor1:2011, Information technology - Open Systems Interconnection - The Directory: Public-key and attribute certificate frameworks - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-8:2008/Cor1:2011)

INCITS/ISO/IEC 9594-8:2008/Cor2:2012, Information technology - Open Systems Interconnection - The Directory: Public-key and attribute certificate frameworks - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-8:2008/Cor2:2012)

INCITS/ISO/IEC 9594-9:2005/Cor1:2011, Information technology - Open Systems Interconnection - The Directory: Replication - Technical Corrigendum 1 (identical national adoption of ISO/IEC 9594-9:2005/Cor1:2011)

INCITS/ISO/IEC 10367-1991 (R201x), Information technology - Standardized coded graphic character sets for use in 8-bit codes (reaffirmation of INCITS/ISO/IEC 10367-1991 (R2008))

INCITS/ISO/IEC 10538-1991 (R201x), Information technology - Control functions for text communication (reaffirmation of INCITS/ISO/IEC 10538-1991 (R2008))

TAPPI (Technical Association of the Pulp and Paper Industry)

Office: 15 Technology Parkway South
Peachtree Corners, GA 30092

Contact: Charles Bohanan

Phone: (770) 209-7276

Fax: (770) 446-6947

E-mail: standards@tappi.org

BSR/TAPPI T 843 om-201x, Fluted edge crush of corrugating medium (rigid support method) (new standard)

UAMA (ASC B74) (Unified Abrasives Manufacturers' Association)

Office: 30200 Detroit Road
Cleveland, OH 44145-1967

Contact: Jeffrey Wherry

Phone: (440) 899-0010

Fax: (440) 892-1404

E-mail: jjw@wherryassoc.com; djh@wherryassoc.com

BSR B74.16-2002 (R201x), Checking the Size of Diamond and Cubic Boron Nitride Abrasive Grain (reaffirmation of ANSI B74.16-2002 (R2007))

BSR B74.23-2002 (R201x), Measuring Relative Crystal Strengths of Diamond and Cubic Boron Nitride (reaffirmation of ANSI B74.23-2002 (R2007))

UL (Underwriters Laboratories, Inc.)

Office: 455 E. Trimble Rd.
San Jose, CA 95131-1230

Contact: Marcia Kawate

Phone: (408) 754-6743

Fax: (408) 754-6743

E-mail: Marcia.M.Kawate@ul.com

BSR/UL 6703-201x, Standard for Safety for Connectors for Use in Photovoltaic Systems (new standard)

BSR/UL 60730-2-10-201X, Automatic Electrical Controls for Household and Similar Use; Part 2: Particular Requirements for Motor Starting Relays (identical national adoption of IEC 60730-2-10)

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.

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

New Standard

ANSI/APCO 3.106.1-2013, Core Competencies and Minimum Training Standards for Public Safety Communications Quality Assurance Evaluator (QAE) (new standard): 4/11/2013

ASC X9 (Accredited Standards Committee X9, Incorporated)

Reaffirmation

ANSI X9.42-2003 (R2013), Public Key Cryptography for Financial Services Industry: Agreement of Symmetric Keys Using Discrete Logarithm Cryptography (reaffirmation of ANSI X9.42-2003): 4/15/2013

ANSI X9.59-2006 (R2013), Electronic Commerce for the Financial Services Industry: Account-Based Secure Payment Objects (reaffirmation of ANSI X9.59-2006): 4/15/2013

ANSI X9.80-2005 (R2013), Prime Number Generation, Primality Testing, and Primality Certificates (reaffirmation of ANSI X9.80-2005): 4/15/2013

ANSI X9.100-180-2006 (R2013), Specifications for Electronic Exchange of Check and Image Data (Non-Domestic) (reaffirmation of ANSI X9.100-180 Part 1-2006): 4/15/2013

ANSI X9.106-2003/ISO 18245 (R2013), Retail Financial Services - Merchant Category Codes (reaffirmation of ANSI X9.106-2003/ISO 18245): 4/15/2013

ANSI X9.101/ISO 6166-2003 (R2013), Securities and related financial instruments - International securities identification numbering systems (ISIN) (reaffirmation of ANSI X9.101/ISO 6166-2003): 4/15/2013

ANSI X9.24 Part 2-2006 (R2013), Retail Financial Services Symmetric Key Management - Part 2: Using Asymmetric Techniques for the Distribution of Symmetric Keys (reaffirmation of ANSI X9.24 Part 2-2006): 4/15/2013

ANSI X9.82 Part 1-2006 (R2013), Random Number Generation - Part 1: Overview and Basic Principles (reaffirmation of ANSI X9.82 Part 1-2006): 4/15/2013

ANSI X9.8 Part 1-2003 (R2013), Personal Identification Number PIN Management (reaffirmation of ANSI X9.8 Part 1-2003): 4/15/2013

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

Addenda

ANSI/ASHRAE Addendum 55j-2013, Thermal Environmental Conditions for Human Occupancy (addenda to ANSI/ASHRAE Standard 55-2010): 4/16/2013

ANSI/ASHRAE Addendum 62.1n-2013, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2010): 4/16/2013

ASME (American Society of Mechanical Engineers)

New Standard

ANSI/ASME MFC-5.3-2013, Measurement of Liquid Flow in Closed Conduits Using Doppler Ultrasonic Flowmeters (new standard): 4/12/2013

Reaffirmation

ANSI/ASME B17.2-1967 (R2013), Woodruff Keys and Keyseats (reaffirmation of ANSI/ASME B17.2-1967 (R2008)): 4/12/2013

ANSI/ASME B18.13-1996 (R2013), Screw and Washer Assemblies - SEMS (Inch) (reaffirmation of ANSI/ASME B18.13-1996 (R2008)): 4/12/2013

ANSI/ASME B18.16.4-2008 (R2013), Serrated Hex Flange Locknuts 90,000 PSI (Inch Series) (reaffirmation of ANSI/ASME B18.16.4-2008): 4/12/2013

ANSI/ASME B17.1-1967 (R2013), Keys and Keyseats (reaffirmation of ANSI/ASME B17.1-1967 (R2008)): 4/12/2013

ATIS (Alliance for Telecommunications Industry Solutions)

Reaffirmation

ANSI ATIS 1000104-1991 (R2013), Exchange-Interexchange Carrier Interfaces - Individual Channel Signaling Protocols (reaffirmation of ANSI ATIS 1000104-1991 (R2008)): 4/16/2013

ANSI ATIS 1000610-1998 (R2013), Generic Procedures for the Control of ISDN Supplementary Services (reaffirmation of ANSI ATIS 1000610-1998 (R2008)): 4/16/2013

ANSI ATIS 1000610.a-1998 (R2013), Generic Procedures for the Control of ISDN Supplementary Services, Modification to the Redirecting Number Information Element (reaffirmation of ANSI ATIS 1000610.a-1998 (R2008)): 4/16/2013

ANSI ATIS 1000611-1991 (R2013), Signalling System Number 7 (SS7) - Supplementary Services for Non-ISDN Subscribers (reaffirmation of ANSI ATIS 1000611-1991 (R2008)): 4/16/2013

ANSI ATIS 1000612-1992 (R2013), Integrated Services Digital Network (ISDN) - Terminal Adaption Using Statistical Multiplexing (reaffirmation of ANSI ATIS 1000612-1992 (R2008)): 4/16/2013

ANSI ATIS 1000618-1991 (R2013), Integrated Services Digital Network (ISDN) - Core Aspects of Frame Protocol for Use with Frame Relay Bearer Service (reaffirmation of ANSI ATIS 1000618-1991 (R2008)): 4/16/2013

CSA (CSA Group)

Reaffirmation

* ANSI Z21.86-2008 (R2013), Standard for Vented Gas-Fired Space Heating Appliances (same as CGA 2.32) (reaffirmation of ANSI Z21.86-2008): 4/12/2013

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

New Standard

ANSI N14.7-2013, Guidance for Packaging Type A Quantities of Radioactive Materials (new standard): 4/15/2013

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

Reaffirmation

ANSI INCITS 305-1998 (R2013), Information technology - SCSI Enclosure Services (SES) (reaffirmation of ANSI INCITS 305-1998 (R2008)): 4/12/2013

ANSI INCITS 305-1998/AM1-2000 (R2013), Information technology - SCSI - Enclosure Services (SES) - Am 1 (reaffirmation of ANSI INCITS 305-1998/AM1-2000 (R2008)): 4/12/2013

ANSI INCITS 306-1998 (R2013), Information technology - SCSI-3 Block Commands (SBC) (reaffirmation of ANSI INCITS 306-1998 (R2008)): 4/12/2013

ANSI INCITS 320-1998 (R2013), Information technology - Spatial Data Transfer (reaffirmation of ANSI INCITS 320-1998 (R2008)): 4/11/2013

ANSI INCITS 330-2000/AM1-2003 (R2013), Information technology - SCSI - Reduced Block Command Set (RBC) - Am 1 (reaffirmation of ANSI INCITS 330-2000/AM1-2003 (R2008)): 4/12/2013

ANSI INCITS 350-2003 (R2013), Information technology - SCSI Fibre Channel Protocol - 2 (FCP-2) (reaffirmation of ANSI INCITS 350-2003 (R2008)): 4/12/2013

ANSI INCITS 366-2003 (R2013), Information technology - SCSI Architecture Model-2 (SAM-2) (reaffirmation of ANSI INCITS 366-2003 (R2008)): 4/12/2013

ANSI INCITS 367-2003 (R2013), SCSI Parallel Interface - 5 (SPI-5) (reaffirmation of ANSI INCITS 367-2003 (R2008)): 4/12/2013

ANSI INCITS 368-2003 (R2013), Information technology - SCSI Passive Interconnect Performance (PIP) (reaffirmation of ANSI INCITS 368-2003 (R2008)): 4/12/2013

ANSI INCITS 369-2003 (R2013), Information technology - SCSI Signal Modeling (SSM-2) (reaffirmation of ANSI INCITS 369-2003 (R2008)): 4/12/2013

ANSI INCITS 375-2004 (R2013), Information technology - Serial Bus Protocol 3 (SBP-3) (reaffirmation of ANSI INCITS 375-2004 (R2008)): 4/12/2013

ANSI INCITS 380-2003 (R2013), Information technology - SCSI Stream Commands -2 (SSC-2) (reaffirmation of ANSI INCITS 380-2003 (R2008)): 4/12/2013

ANSI INCITS 382-2004 (R2013), Information technology - SCSI Media Changer Command Set (SMC-2) (reaffirmation of ANSI INCITS 382-2004 (R2008)): 4/12/2013

ANSI INCITS 441-2008 (R2013), Information technology - Automation/Drive Interface - Commands-2 (ADC-2) (reaffirmation of ANSI INCITS 441-2008): 4/12/2013

ANSI INCITS 446-2008 (R2013), Information technology - Identifying Attributes for Named Physical and Cultural Geographic Features (Except Roads and Highways) of the United States, Its Territories, Outlying Areas, and Freely Associated Areas, and the Waters of the Same to the Limit (reaffirmation of ANSI INCITS 446-2008): 4/11/2013

ANSI INCITS 447-2008 (R2013), Information technology - SCSI Architecture Model - 4 (SAM-4) (reaffirmation of ANSI INCITS 447-2008): 4/12/2013

INCITS/ISO 6709-2008 (R2013), Standard representation of geographic point locations by coordinates (reaffirmation of INCITS/ISO 6709-2008): 4/11/2013

INCITS/ISO 19107-2003 (R2013), Geographic Information - Spatial schema (reaffirmation of INCITS/ISO 19107-2003 (R2008)): 4/11/2013

INCITS/ISO 19108-2002 (R2013), Geographic information - Temporal schema (reaffirmation of INCITS/ISO 19108-2002 (R2008)): 4/11/2013

INCITS/ISO 19113-2002 (R2013), Geographic information - Quality principles (reaffirmation of INCITS/ISO 19113-2002 (R2008)): 4/11/2013

INCITS/ISO 19114-2003 (R2013), Geographic information - Quality evaluation procedures (reaffirmation of INCITS/ISO 19114-2003 (R2008)): 4/11/2013

INCITS/ISO 19115-2003 (R2013), Geographic information - Metadata (reaffirmation of INCITS/ISO 19115-2003 (R2008)): 4/11/2013

INCITS/ISO 19132-2008 (R2013), Geographic information - Location Based Services - Reference model (reaffirmation of INCITS/ISO 19132-2008): 4/11/2013

INCITS/ISO 19141-2008 (R2013), Geographic information - Schema for moving features (reaffirmation of INCITS/ISO 19141-2008): 4/11/2013

INCITS/ISO 19119-2005, AM 1-2008 (R2013), Geographic information - Services - Amendment 1: Extensions of the service metadata model (reaffirmation of INCITS/ISO 19119-2005, Adm 1-2008): 4/11/2013

INCITS/ISO/IEC 9075-3-1999 (R2013), Information technology - Database Languages - SQL - Part 3: Call-level Interface (SQL/CLI) (reaffirmation of INCITS/ISO/IEC 9075-3-1999): 4/11/2013

INCITS/ISO/IEC 9075-9-2008 (R2013), Information technology - Database Languages - SQL - Part 9: Management of External Data (SQL/MED) (reaffirmation of INCITS/ISO/IEC 9075-9-2008): 4/11/2013

INCITS/ISO/IEC 9075-10-2008 (R2013), Information technology - Database Languages - SQL - Part 10: Object language bindings (SQL/OLB) (reaffirmation of INCITS/ISO/IEC 9075-10-2008): 4/11/2013

INCITS/ISO/IEC 9075-13-2008 (R2013), Information technology -- Database languages - SQL - Part 13: SQL Routines and Types Using the Java TM Programming Language (SQL/JRT) (reaffirmation of INCITS/ISO/IEC 9075-13-2008): 4/11/2013

NBBPVI (National Board of Boiler and Pressure Vessel Inspectors)

Revision

ANSI/NB 23-2013, National Board Inspection Code (revision and redesignation of ANSI/NB 23-2011): 4/12/2013

NSF (NSF International)

Revision

- * ANSI/NSF 347-2012 (i2), Sustainability Assessment for Single Ply Roofing Membranes (revision of ANSI/NSF 347-2012 (i1r3)): 12/31/2012

UL (Underwriters Laboratories, Inc.)

Reaffirmation

ANSI/UL 1238-2008 (R2013), Control Equipment for Use with Flammable Liquid Dispensing Devices (reaffirmation of ANSI/UL 1238-2008): 4/11/2013

Project Initiation Notification System (PINS)

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

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

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

AGMA (American Gear Manufacturers Association)

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Fax: (703) 684-0242

E-mail: fischer@agma.org; tech@agma.org

BSR/AGMA 6034-CXX-201x, Practice for Enclosed Cylindrical Wormgear Speed Reducers and Gearmotors (revision of ANSI/AGMA 6034-B92 (R2010))

Stakeholders: Users and manufacturers of cylindrical wormgear speed reducers and gearmotors.

Project Need: Update this standard to reflect current state-of-the-art.

This standard gives a method for rating and design of specific enclosed cylindrical wormgear reducers and gearmotors at speeds not greater than 3600 rpm or mesh sliding velocities not more than 6000 ft/min (30m/s).

AMCA (Air Movement and Control Association)

Office: 30 West University Drive
Arlington Heights, IL 60004-1893

Contact: John Pakan

Fax: (847) 253-0088

E-mail: jpakan@amca.org

* BSR/AMCA 510-201x, Methods of Testing Heavy Duty Dampers for Rating (revision of ANSI/AMCA 510-2004 (R2009))

Stakeholders: Damper manufacturers, building engineers, utility companies.

Project Need: To develop a method of test for dampers used in utility and heavy industry.

The scope of the products covered in this standard shall include dampers, which are used to control flow of a gas (be it a specific gas, a mixture of gas and air, or air alone) or to isolate one section of a duct system from another section of the system. The scope narrows to those dampers generally described as "custom design," "heavy duty," or "severe service," because such dampers are normally used in applications where elevated temperature, erosion, and/or corrosion conditions exist.

* BSR/AMCA 520-2009 (R201x), Laboratory Methods for Testing Actuators (reaffirmation of ANSI/AMCA 520-2009)

Stakeholders: Actuator manufacturers, damper manufacturers, building engineers.

Project Need: To develop a repeatable method of test for testing actuator performance and reliability.

The testing requirements will cover torque or force rating, long-term holding, operational life, elevated temperature performance, periodic maintenance, production, and sound testing for both pneumatic and electric operators.

AWWA (American Water Works Association)

Office: 6666 W. Quincy Ave.
Denver, CO 80235

Contact: Paul Olson

Fax: (303) 795-7603

E-mail: polson@awwa.org; vdavid@awwa.org

BSR/AWWA D121a-201x, Bolted Aboveground Thermosetting Fiberglass-Reinforced Plastic Panel-Type Tanks for Water Storage (supplement to ANSI/AWWA D121-2012)

Stakeholders: Drinking water treatment and supply industry. Water utilities, consulting engineers, water treatment equipment manufacturers, etc.

Project Need: The purpose of this addendum is to correct the compressive strength requirements for FRP panels.

This addendum corrects the initial, unaged ultimate compressive strength requirements for FRP panels in the weakest direction.

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

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

Contact: *Barbara Bennett*

Fax: (202) 638-4922

E-mail: bbennett@itic.org; rporter@itic.org

INCITS/ISO/IEC 2382-17:1999, Information technology - Vocabulary - Part 17: Databases (identical national adoption of ISO/IEC 2382-17:1999 and revision of INCITS/ISO/IEC 2382-17-1996 (R2011))

Stakeholders: ICT industry.

Project Need: Adoption of this International Standard will be beneficial to the ICT industry.

This part of ISO/IEC 2382 is intended to facilitate international communication in the area of databases. It presents, in two languages, terms and definitions of selected concepts relevant to databases and identifies relationships among the entries. To facilitate their translation into other languages, the definitions are drafted so as to avoid, as far as possible, any peculiarity attached to a language. This part of ISO/IEC 2382 defines concepts related to databases.

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

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

Contact: *Rachel Porter*

Fax: 202-638-4922

E-mail: rporter@itic.org

BSR INCITS 528-201x, Information technology - Common Building Blocks Specification (new standard)

Stakeholders: Easy access for a related set of management elements to gain traction with the development community.

Project Need: The need for the standard arises from the need for common representations, protocols, and models for managing desktop, mobile, server, virtualized systems and storage across many different vendors.

The Common Building Blocks Specification describes an open, secure, portable, efficient, and extensible infrastructure for management of desktop, mobile, server, virtualized, and storage systems.

BSR/INCITS 529-201x, Information technology - ATA/ATAPI Command Set - 4 (ACS-4) (new standard)

Stakeholders: The contemplated enhancements for ACS-3 are considered essential for the continued growth of the low-end segment of the storage market and for the expansion into the consumer storage segment.

Project Need: There is a continuing need to enhance the ATA hard-drive command set definition while maintaining a high degree of compatibility with previous versions of the standard.

This project would be an evolutionary follow-on to project 2161D, ATA/ATAPI Command Set - 3. The project would: (a) Document the command set implemented by devices that support the ATA architecture; (b) Address new features that were not sufficiently developed for ACS-3; and (c) Any other proposals or modifications to the command set suggested or proposed by T13 committee members.

NETA (InterNational Electrical Testing Association)

Office: 3050 Old Centre, Suite 102
Portage, MI 49024

Contact: *Kristen Wicks*

Fax: (269) 488-3683

E-mail: kwicks@netaworld.org

BSR/NETA MTS-201x, Standard for Maintenance Testing Specifications for Electrical Power Equipment and Systems (revision of ANSI/NETA MTS-2011)

Stakeholders: Large industry, healthcare, institution maintenance, P&C insurance underwriters, governmental agencies, A&E firms, inspection authorities.

Project Need: Outlines the tests needed for continued operation of existing electrical systems and equipment.

These specifications cover the suggested field tests and inspections that are available to assess the suitability for continued service and reliability of electrical power equipment and systems. The purpose of these specifications is to assure that tested electrical equipment and systems are operational, are within applicable standards and manufacturer's tolerances, and are suitable for continued service.

TAPPI (Technical Association of the Pulp and Paper Industry)

Office: 15 Technology Parkway South
Peachtree Corners, GA 30092

Contact: *Charles Bohanan*

Fax: (770) 446-6947

E-mail: standards@tappi.org

BSR/TAPPI T 843 om-201x, Fluted edge crush of corrugating medium (rigid support method) (new standard)

Stakeholders: Manufacturers of pulp, paper, packaging, or related products; consumers or converters of such products; and suppliers of equipment, supplies, or raw materials for the manufacture of such products.

Project Need: To conduct required five-year review of an existing TAPPI standard in order to revise it, if needed to address new technology or correct errors.

This test evaluates the ability of corrugating medium to contribute to the compression strength of a corrugated box. It is a procedure for measuring the edgewise compression strength of a laboratory-fluted strip of corrugating medium in a direction parallel to the fluted tips.

American National Standards Maintained Under Continuous Maintenance

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

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

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

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

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

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

ANSI-Accredited Standards Developers Contact Information

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

<p>AAMI Association for the Advancement of Medical Instrumentation 4301 N Fairfax Drive Suite 301 Arlington, VA 22203-1633 Phone: (703) 253-8274 Fax: (703) 276-0793 Web: www.aami.org</p>	<p>ASABE American Society of Agricultural and Biological Engineers 2950 Niles Road St Joseph, MI 49085 Phone: (269) 932-7015 Fax: (269) 429-3852 Web: www.asabe.org</p>	<p>AWWA American Water Works Association 6666 W. Quincy Ave. Denver, CO 80235 Phone: (303) 347-6178 Fax: (303) 795-7603 Web: www.awwa.org</p>	<p>NASPO North American Security Products Organization c/o Intel Corporation 2200 Mission College Blvd MS: SC4-122 Santa Clara, CA 95052-8119 Phone: (408) 765-1806 or (408) 595-4544 Fax: (408) 765-7737 Web: www.naspo.info/</p>
<p>ABYC American Boat and Yacht Council 613 Third Street Suite 10 Annapolis, MD 21403 Phone: (410) 990-4460 Fax: (410) 990-4466 Web: www.abycinc.org</p>	<p>ASC X9 Accredited Standards Committee X9, Incorporated 1212 West Street, Suite 200 Annapolis, MD 21401 Phone: (410) 267-7707 Fax: (410) 267-0961 Web: www.x9.org</p>	<p>CSA CSA Group 8501 East Pleasant Valley Rd. Cleveland, OH 44131 Phone: (216) 524-4990 Fax: (216) 520-8979 Web: www.csa-america.org</p>	<p>NBBPVI National Board of Boiler and Pressure Vessel Inspectors 1055 Crupper Avenue Columbus, OH 43229-1183 Phone: (614) 888-8320 Fax: (614) 847-1828 Web: www.nationalboard.org</p>
<p>AGMA American Gear Manufacturers Association 1001 N Fairfax Street, 5th Floor Alexandria, VA 22314 Phone: (703) 684-0211 Fax: (703) 684-0242 Web: www.agma.org</p>	<p>ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. 1791 Tullie Circle, NE Atlanta, GA 30329 Phone: (404) 636-8400 Fax: (404) 321-5478 Web: www.ashrae.org</p>	<p>DASMA Door and Access Systems Manufacturers Association 1300 Sumner Avenue Cleveland, OH 44115-2851 Phone: (216) 241-7333 Fax: (216) 241-0105</p>	<p>NETA InterNational Electrical Testing Association 3050 Old Centre, Suite 102 Portage, MI 49024 Phone: (269) 488-6382 Fax: (269) 488-3683 Web: www.netaworld.org</p>
<p>AIAA American Institute of Aeronautics and Astronautics 1801 Alexander Bell Drive, Suite 500 Reston, VA 20191-4344 Phone: 703-264-7546 Web: www.aiaa.org</p>	<p>ASME American Society of Mechanical Engineers Two Park Avenue New York, NY 10016 Phone: (212) 591-8521 Fax: (212) 591-8501 Web: www.asme.org</p>	<p>ECA Electronic Components Association 2214 Rock Hill Road Suite 170 Herndon, VA 20170-4212 Phone: (571) 323-0294 Fax: (571) 323-0245 Web: www.eciaonline.org</p>	<p>NSF NSF International 789 N. Dixboro Road Ann Arbor, MI 48104 Phone: 734-214-6233 Fax: 734-827-7875 Web: www.nsf.org</p>
<p>AMCA AMCA International, Inc. 30 West University Drive Arlington Heights, IL 60004-1893 Phone: (847) 704-6295 Fax: (847) 253-0088 Web: www.amca.org</p>	<p>ASTM ASTM International 100 Barr Harbor Drive West Conshohocken, PA 19428-2959 Phone: (610) 832-9743 Fax: (610) 834-3655 Web: www.astm.org</p>	<p>HI Hydraulic Institute 6 Campus Drive, 1st Fl North Parsippany, NJ 07054 Phone: (973) 267-9700 Ext 123 Fax: (973) 267-9055 Web: www.pumps.org</p>	<p>OPEI Outdoor Power Equipment Institute 341 South Patrick Street Alexandria, VA 22314 Phone: (703) 549-7600, ext. 24 Fax: (703) 549-7604 Web: www.opei.org</p>
<p>APCO Association of Public-Safety Communications Officials-International 351 N. Williamson Boulevard Daytona Beach, FL 32114-1112 Phone: (919) 625-6864 Fax: (386) 944-2794 Web: www.apcolntl.org</p>	<p>ATIS Alliance for Telecommunications Industry Solutions 1200 G Street, NW Suite 500 Washington, DC 20005 Phone: (202) 434-8841 Fax: (202) 347-7125 Web: www.atis.org</p>	<p>INMM (ASC N14) Institute of Nuclear Materials Management 75 North 200 East Oak Ridge National Laboratory Richmond, UT 84333 Phone: (435) 258-3730 Web: www.inmm.org</p>	<p>PMI (ORGANIZATION) Project Management Institute 14 Campus Boulevard Newtown Square, PA 19073-3299 Phone: 610-356-4600 Fax: 610-356-4647 Web: www.pmi.org</p>
		<p>ITI (INCITS) InterNational Committee for Information Technology Standards 1101 K Street NW, Suite 610 Washington, DC 20005 Phone: 202-626-5741 Fax: 202-638-4922 Web: www.incits.org</p>	

SCTE

Society of Cable Telecommunications
Engineers

140 Philips Rd.
Exton, PA 19341
Phone: (610) 594-7308
Fax: (610) 363-7133
Web: www.scte.org

TAPPI

Technical Association of the Pulp and
Paper Industry

15 Technology Parkway South
Peachtree Corners, GA 30092
Phone: (770) 209-7276
Fax: (770) 446-6947
Web: www.tappi.org

UAMA (ASC B74)

Unified Abrasive Manufacturers'
Association

30200 Detroit Road
Cleveland, OH 44145-1967
Phone: (440) 899-0010
Fax: (440) 892-1404
Web: www.uama.org

UL

Underwriters Laboratories, Inc.

455 E. Trimble Rd.
San Jose, CA 95131-1230
Phone: (408) 754-6743
Fax: (408) 754-6743
Web: www.ul.com/



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

ISO/IEC JTC 1 Technical Reports

[ISO 9660/Amd1:2013](#), Information processing - Volume and file structure of CD-ROM for information interchange - Amendment 1, \$20.00

[ISO/IEC TR 29181-3:2013](#), Information technology - Future Network - Problem statement and requirements - Part 3: Switching and routing, \$142.00

[ISO/IEC TR 29181-6:2013](#), Information technology - Future Network - Problem statement and requirements - Part 6: Media transport, \$150.00

[ISO/IEC TR 29181-7:2013](#), Information technology - Future Network - Problem statement and requirements - Part 7: Service composition, \$181.00

AGRICULTURAL FOOD PRODUCTS (TC 34)

[ISO 21570/Amd1:2013](#), Foodstuffs - Methods of analysis for the detection of genetically modified organisms and derived products - Quantitative nucleic acid based methods - Amendment 1, \$20.00

[ISO 17180:2013](#), Animal feeding stuffs - Determination of lysine, methionine and threonine in commercial amino acid products and premixtures, \$90.00

[ISO 5530-1:2013](#), Wheat flour - Physical characteristics of doughs - Part 1: Determination of water absorption and rheological properties using a farinograph, \$135.00

AIR QUALITY (TC 146)

[ISO 12219-4:2013](#), Interior air of road vehicles - Part 4: Method for the determination of the emissions of volatile organic compounds from vehicle interior parts and materials - Small chamber method, \$104.00

CORROSION OF METALS AND ALLOYS (TC 156)

[ISO 7539-11:2013](#), Corrosion of metals and alloys - Stress corrosion cracking - Part 11: Guidelines for testing the resistance of metals and alloys to hydrogen embrittlement and hydrogen-assisted cracking, \$104.00

DENTISTRY (TC 106)

[ISO 3630-2:2013](#), Dentistry - Endodontic instruments - Part 2: Enlargers, \$104.00

EARTH-MOVING MACHINERY (TC 127)

[ISO 7130:2013](#), Earth-moving machinery - Operator training - Content and methods, \$53.00

ESSENTIAL OILS (TC 54)

[ISO 25157:2013](#), Essential oil of rose, Chinese Kushui type (*Rosa sertata* x *Rosa rugosa*), \$70.00

FINE CERAMICS (TC 206)

[ISO 22197-4:2013](#), Fine ceramics (advanced ceramics, advanced technical ceramics) - Test method for air-purification performance of semiconducting photocatalytic materials - Part 4: Removal of formaldehyde, \$80.00

[ISO 22197-5:2013](#), Fine ceramics (advanced ceramics, advanced technical ceramics) - Test method for air-purification performance of semiconducting photocatalytic materials - Part 5: Removal of methyl mercaptan, \$80.00

FLUID POWER SYSTEMS (TC 131)

[ISO 6263:2013](#), Hydraulic fluid power - Compensated flow-control valves - Mounting surfaces, \$120.00

GRAPHIC TECHNOLOGY (TC 130)

[ISO 14298:2013](#), Graphic technology - Management of security printing processes, \$120.00

IMPLANTS FOR SURGERY (TC 150)

[ISO 5841-3:2013](#), Implants for surgery - Cardiac pacemakers - Part 3: Low-profile connectors (IS-1) for implantable pacemakers, \$90.00

PETROLEUM PRODUCTS AND LUBRICANTS (TC 28)

[ISO 13736:2013](#), Determination of flash point - Abel closed-cup method, \$126.00

PHOTOGRAPHY (TC 42)

[ISO 22028-2:2013](#), Photography and graphic technology - Extended colour encodings for digital image storage, manipulation and interchange - Part 2: Reference output medium metric RGB colour image encoding (ROMM RGB), \$120.00

PLASTICS (TC 61)

[ISO 75-1:2013](#), Plastics - Determination of temperature of deflection under load - Part 1: General test method, \$80.00

[ISO 75-2:2013](#), Plastics - Determination of temperature of deflection under load - Part 2: Plastics and ebonite, \$70.00

[ISO 17178:2013](#), Adhesives - Adhesives for bonding parquet to subfloor - Test methods and minimum requirements, \$80.00

REFRIGERATION (TC 86)

[ISO 16358-1:2013](#), Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 1: Cooling seasonal performance factor, \$135.00

[ISO 16358-2:2013](#), Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 2: Heating seasonal performance factor, \$164.00

[ISO 16358-3:2013](#), Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 3: Annual performance factor, \$60.00

ROAD VEHICLES (TC 22)

[ISO 17479:2013](#), Motorcycles - Measurement methods for gaseous exhaust emissions during inspection or maintenance, \$80.00

ROLLING BEARINGS (TC 4)

[ISO 2982-1:2013](#), Rolling bearings - Accessories - Part 1: Dimensions for adapter sleeve assemblies and withdrawal sleeves, \$70.00

[ISO 2982-2:2013](#), Rolling bearings - Accessories - Part 2: Dimensions for locknuts and locking devices, \$90.00

SAFETY OF MACHINERY (TC 199)

[ISO 13856-1:2013](#), Safety of machinery - Pressure-sensitive protective devices - Part 1: General principles for design and testing of pressure-sensitive mats and pressure-sensitive floors, \$181.00

[ISO 13856-2:2013](#), Safety of machinery - Pressure-sensitive protective devices - Part 2: General principles for design and testing of pressure-sensitive edges and pressure-sensitive bars, \$192.00

SMALL TOOLS (TC 29)

[ISO 9284:2013](#), Abrasive grains - Test-sieving machines, \$53.00

SPRINGS (TC 227)

[ISO 16249:2013](#), Springs - Symbols, \$126.00

TEXTILES (TC 38)

[ISO 13934-1:2013](#), Textiles - Tensile properties of fabrics - Part 1: Determination of maximum force and elongation at maximum force using the strip method, \$90.00

TRANSPORT INFORMATION AND CONTROL SYSTEMS (TC 204)

[ISO 29281-1:2013](#), Intelligent transport systems - Communication access for land mobiles (CALM) - Non-IP networking - Part 1: Fast networking & transport layer protocol (FNTP), \$150.00

[ISO 29281-2:2013](#), Intelligent transport systems - Communication access for land mobiles (CALM) - Non-IP networking - Part 2: Legacy system support, \$135.00

WATER QUALITY (TC 147)

[ISO 13165-1:2013](#), Water quality - Radium-226 - Part 1: Test method using liquid scintillation counting, \$98.00

WELDING AND ALLIED PROCESSES (TC 44)

[ISO 15615:2013](#), Gas welding equipment - Acetylene manifold systems for welding, cutting and allied processes - Safety requirements in high-pressure devices, \$104.00

[ISO 9455-16:2013](#), Soft soldering fluxes - Test methods - Part 16: Flux efficacy test, wetting balance method, \$112.00

ISO Technical Reports

COSMETICS (TC 217)

[ISO/TR 14735:2013](#), Cosmetics - Analytical methods - Nitrosamines: Technical guidance document for minimizing and determining N-nitrosamines in cosmetics, \$80.00

ERGONOMICS (TC 159)

[ISO/TR 7250-2/Amd1:2013](#), Ferronickel - Determination of cobalt content - Flame atomic absorption spectrometric method - Amendment 1, \$20.00

ISO Technical Specifications

PAPER, BOARD AND PULPS (TC 6)

[ISO/TS 17958:2013](#), Paper and board - Determination of fracture toughness - Constant rate of elongation method (1,7 mm/s), \$104.00

PERSONAL SAFETY - PROTECTIVE CLOTHING AND EQUIPMENT (TC 94)

[ISO/TS 16976-7:2013](#), Respiratory protective devices - Human factors - Part 7: Hearing and speech, \$90.00

STERILIZATION OF HEALTH CARE PRODUCTS (TC 198)

[ISO/TS 17665-3:2013](#), Sterilization of health care products - Moist heat - Part 3: Guidance on the designation of a medical device to a product family and processing category for steam sterilization, \$192.00

ISO/IEC JTC 1, Information Technology

[ISO/IEC 10646/Amd1:2013](#), Information technology - Universal Coded Character Set (UCS) - Amendment 1: Linear A, Palmyrene, Manichaean, Khojki, Khudawadi, Bassa Vah, Duployan, and other characters, \$268.00

[ISO/IEC 10918-6:2013](#), Information technology - Digital compression and coding of continuous-tone still images: Application to printing systems, \$60.00

IEC Standards

FIBRE OPTICS (TC 86)

[IEC 61300-2-33 Ed. 3.0 b:2012](#), Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-33: Tests - Assembly and disassembly of fibre optic mechanical splices, fibre management systems and closures, \$68.00

MEASURING EQUIPMENT FOR ELECTROMAGNETIC QUANTITIES (TC 85)

[IEC 61557-14 Ed. 1.0 b:2013](#), Electrical safety in low voltage distribution systems up to 1 000 V a.c and 1 500 V d.c - Equipment for testing, measuring or monitoring of protective measures - Part 14: Equipment for testing the safety of electrical equipment for machinery, \$104.00

OTHER

[CISPR 16-4-2 Ed. 2.0 b.cor.1:2013](#), Corrigendum 1 - Specification for radio disturbance and immunity measuring apparatus and methods - Part 4-2: Uncertainties, statistics and limit modelling - Measurement instrument uncertainty, \$0.00

SURGE ARRESTERS (TC 37)

[IEC 61643-311 Ed. 2.0 b:2013](#), Components for low-voltage surge protective devices - Part 311: Performance requirements and test circuits for gas discharge tubes (GDT), \$185.00

TOOLS FOR LIVE WORKING (TC 78)

[IEC 61472 Ed. 3.0 b:2013](#), Live working - Minimum approach distances for a.c. systems in the voltage range 72,5 kV to 800 kV - A method of calculation, \$257.00

Registration of Organization Names in the United States

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

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

PUBLIC REVIEW

Digital Transmission License Administrator

Public Review: March 18, 2013 to June 12, 2013

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

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

Proposed Foreign Government Regulations

Call for Comment

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

The National Center for Standards and Certification Information (NCSCI) at the National Institute of Standards and Technology

(NIST), distributes these proposed foreign technical regulations to U.S. stakeholders via an online service, Notify U.S. Notify U.S. is an e-mail and Web service that allows interested U.S. parties to register, obtain notifications, and read full texts of regulations from countries and for industry sectors of interest to them. To register for Notify U.S., please go to Internet URL: <http://www.nist.gov/notifyus/> and click on "Subscribe".

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

Information Concerning

American National Standards

INCITS Executive Board

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

The InterNational Committee for Information Technology Standards (INCITS), an ANSI accredited SDO, is the forum for information technology developers, producers and users 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 its oversight of programs of its 40+ Technical Committees. Additionally, the INCITS Executive Board exercises international leadership in its role as the US Technical Advisory Group (TAG) to ISO/IEC JTC 1, Information Technology.

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

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

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

Calls for Members

Society of Cable Telecommunications

ANSI Accredited Standards Developer

SCTE, an ANSI-accredited SDO, is the primary organization for the creation and maintenance of standards for the cable telecommunications industry. SCTE's standards mission is to develop standards that meet the needs of cable system operators, content providers, network and customer 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.

ANSI Accredited Standards Developers

Approval of Reaccreditation

Clinical and Laboratory Standards Institute, (CLSI)

At the direction of ANSI's Executive Standards Council (ExSC), the reaccreditation of the Clinical and Laboratory Standards Institute (CLSI), an ANSI Organizational Member, has been approved under its recently revised operating procedures for documenting consensus on CLSI-sponsored American National Standards, effective April 12, 2013. For additional information, please contact: Ms. Luann Ochs, MS, Sr. Vice-President, Operations, Clinical and Laboratory Standards Institute, 950 West Valley Road, Suite 2500, Wayne, PA 19087; phone: 484.588.5940; Email: lochs@clsi.org.

ANSI Accreditation Program for Third Party Product Certification Agencies

Scope Extension

Timber Products Inspection (TPI)

Comment Deadline: May 20, 2013

Jeremy Williams - Treating Division Manager
Timber Products Inspection (TPI)

41 Sigman Road
Conyers, GA 30012
Tel: 770-922-8000, ext 499
Fax: 770-922-1290
E-mail: jwilliams@tpinspection.com
Web: www.tpinspection.com

Patrick Edwards (cc) - Director of Engineering
Timber Products Inspection (TPI)

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Web: www.tpinspection.com

Timber Products Inspection (TPI), an ANSI-accredited certification body, has requested an extension of its scope of ANSI accreditation to include the following:

Specifically –

- CSA 0121 Douglas fir plywood
- CSA 0151 Canadian softwood plywood
- CSA 0325 Construction Sheathing
- Voluntary Product Standard PS 1 Structural Plywood
- Voluntary Product Standard PS 2 Performance Standard for Wood-Based Structural-Use Panels
- AS/NZS 2269

Please send your comments by May 20, 2013 to Reinaldo Balbino Figueiredo, Sr. Program Director, Product Certifier Accreditation, American National Standards Institute, 1899 L Street, NW, 11th Floor, Washington, DC 20036, Fax: 202-293-9287 or e-mail: rfigueir@ansi.org, or Nikki Jackson, Sr. Program Manager, Product Certifier Accreditation, American National Standards Institute, 1899 L Street, NW, 11th Floor, Washington, DC 20036 Fax: 202-293-9287 or e-mail: njackson@ansi.org.

ANSI-ASQ National Accreditation Board

AS9120 Aerospace Quality Management Systems

Notices of Accreditation

Certification Bodies

American Systems Registrar

The ANSI-ASQ National Accreditation Board is pleased to announce the following certification body has earned ANAB accreditation for AS9120 Aerospace Quality Management Systems:

American Systems Registrar

5281 Clyde Park Avenue SW, Suite 1
Wyoming, MI 49509

Web: www.asrworldwide.com

Richelle Kinzie

Phone: 888-891-9002

E-mail: richelle@asrworldwide.com

The Standards Institution of Israel

The ANSI-ASQ National Accreditation Board is pleased to announce the following certification body has earned ANAB accreditation for AS9120 Aerospace Quality Management Systems:

The Standards Institution of Israel

42 Chaim Levanon Street

Tel Aviv 69977

Israel

Web: www.sil.org.il

Jacob Jarosinski

Phone: +972-52-2775070

E-mail: jacob_y@sil.org.il

Information Concerning

International Organization for Standardization (ISO)

New Work Item Proposal

Collaborative Business Relationship Management

Comment Deadline: June 7, 2013

BSI (United Kingdom) has submitted to ISO a new work item proposal for a new ISO standard on Collaborative business relationship management – Requirements, with the following scope statement:

This International Standard will specify requirements for supporting collaborative relationships by providing an effective framework for organizations to identify, establish, maintain, improve and exit collaborative inter-firm relationships. This international standard will provide guidance on the processes required to develop and manage collaboration – inter-organizational relationships such as formal and informal partnerships, alliances, joint ventures, and collaborative supply chain arrangements – and to optimise the value of such relationships.

The standard will help to support the development and management of collaborative business relationships between independent/discrete organizations. It will be applicable to organizations of all sizes from large multinational corporations to micro–small businesses and can apply to several different types of relationship for example:

- a single application (internal divisional relationships, single project or programme, merger and acquisition);
- a specific relationship (a business partnership or joint venture);
- multiple-enterprise relationships (alliances, consortia, networks, and end-to-end supply chains).

The adoption of collaborative working may complement and enhance existing business relationship by promoting activities and behaviours that adds value to all the parties involved. It can provide a more effective way of working and help to build a more strategic environment that opens the way to create increased performance.

The deployment of collaborative approaches does not deflect from any requirements to maintain open and free competition. The development of a new ISO standard for optimising collaborative relationships is also intended to complement and enhance existing contracting processes. Collaborative approaches are expected to be able to operate in unison with either legislative and regulatory requirements or policies, whether corporate or governmental, aimed at ensuring open and free competition. BS 11000-1 2010 Collaborative Business Relationships - a framework specification (attached to this email) will be used as the base document for this International Standard, though the International Standard will be developed using the Annex SL structure.

Anyone wishing to review the new work item proposal can request a copy of the proposal by contacting ANSI's ISO Team via email: isot@ansi.org with submission of comments to Steve Cornish (scornish@ansi.org) by close of business on Friday, June 7, 2013.



**BSR/ASHRAE Addendum p
to ANSI/ASHRAE Standard 55-2010**

Public Review Draft

**Proposed Addendum p to
Standard 55-2010, Thermal
Environmental Conditions
for Human Occupancy**

**First Public Review (March 2013)
(Draft shows Proposed Changes to Current Standard)**

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

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BSR/ASHRAE Addendum p to ANSI/ASHRAE Standard 55-2010, *Thermal Environmental Conditions for Human Occupancy*
 First Public Review Draft

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

FOREWORD

This proposed addenda aligns Section 5.3.4.2 with the definition of average air speed that was clarified in proposed Addendum i.

[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 p to 55-2010

Modify Section 5.3.4.2 as shown below. Note that this section is numbered 5.2.4.2 in the current published version of the Standard. Section 5.2.4.2 was modified by Addendum f currently published and posted for free on the ASHRAE website at <https://www.ashrae.org/standards-research--technology/standards-addenda>.

5.3.4.2 Draft. At operative temperatures below 22.5°C (72.5°F), ~~air speed~~ average air speed caused by the building, its fenestration, and its HVAC system shall not exceed 0.15 m/s (30 fpm) ~~at any height from the ankle to the head~~. This limit does not require consideration of air movement produced by office equipment or occupants.



**BSR/ASHRAE Addendum q
to ANSI/ASHRAE Standard 55-2010**

Public Review Draft

**Proposed Addendum q to
Standard 55-2010, Thermal
Environmental Conditions
for Human Occupancy**

**First Public Review (March 2013)
(Draft shows Proposed Changes to Current Standard)**

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BSR/ASHRAE Addendum q to ANSI/ASHRAE Standard 55-2010, *Thermal Environmental Conditions for Human Occupancy*
 First Public Review Draft

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FOREWORD

This proposed addendum deletes Section 5.3.3.4 Air Speed Measurement for consistency with Draft Addendum 55 i. The deleted section is mostly informative text. New definitions are added for “average air speed” and “average air temperature” to clarify how these commonly used terms apply to averages across the human body. Note that these definitions are also included in Draft Addendum 55n.

[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 q to 55-2010

Add the following definitions to Section 3.0.

air speed, average: the average temperature of the air surrounding a *representative occupant*. The average is with respect to location and time. The spatial average is for three heights as defined for *average air temperature*. The air-speed is averaged over an interval not less than 1 and not more than 3 minutes. Variations that occur over a period greater than three minutes shall be treated as multiple different air speeds.

temperature, air average (t_a): the average temperature of the air surrounding a *representative occupant*. The average is with respect to location and time. The spatial average is the numerical average of the air temperature at the ankle level, the waist level, and the head level. These levels are 0.1, 0.6, and 1.1 m (4, 24, and 43 in.) for seated occupants; and 0.1, 1.1, and 1.7 m (4, 43, and 67 in.) for standing occupants. Time averaging is over a period not less than 3 and not more than 15 minutes.

Delete Section 5.3.3.4. Note that this is Section 5.2.3.4 in the current published standard.

5.3.3.4 Air Speed Measurement. At operative temperatures above 22.5°C (72.5°F), the overall heat balance of the body determines comfort. For this, the average air speed specified in Section 5.5 is used.

At operative temperatures below 22.5°C (72.5°F), however, the problem is avoiding local thermal discomfort, usually occurring on an unclothed portion of the body. The SET and PMV models do not distinguish between clothed and unclothed portions of the body, so the following conservative approach is adopted. The *maximum* mean air speed of the three measurement heights is used for the SET calculations, thereby overpredicting the whole-body cooling to a level that more closely approximates the cooling of the most affected local part. *Note:* To eliminate sources of air movement beyond the designer’s control, the measurements should be taken without occupants present and with any nearby heat-generating equipment turned OFF.



**BSR/ASHRAE/ASHE Addendum u
to ANSI/ASHRAE/ASHE Standard 170-2008**

Public Review Draft

**Proposed Addendum u to
Standard 170-2008, Ventilation of
Health Care Facilities**

**Second Public Review (April 2013)
(Draft shows Proposed Changes to Current Standard)**

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

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FOREWORD

This proposed addendum clarifies note w to Table 7-1, Design Parameters.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striking through~~ (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 u to 170-2008

Revise Table 7-1 and note w as shown below. Table 7-1 and the notes were modified by Addenda b and h to Standard 170-2008 currently published for free on the ASHRAE website at <http://www.ashrae.org/standards-research--technology/standards-addenda>. The rest of Table 7-1 remains unchanged.

Table 7-1 Design Parameters

Function of Space	Pressure Relationship to Adjacent Areas (n)	Minimum Outdoor ach	Minimum Total ach	All Room Air Exhausted Directly to Outdoors (f)	Air Recirculated by means of Room Units (a)	Design Relative Humidity (k), (%)	Design Temperature (l), (°F/°C)
SURGERY AND CRITICAL CARE							
ER waiting rooms (q)	Negative	2	12	Yes (g)	N/R	max 65	70-75/21-24
Triage (q)	Negative	2	12	Yes (g)	N/R	max 60	70-75/21-24
Radiology waiting rooms (q), (w)	Negative	2	12	Yes (g), (w)	N/R	max 60	70-75/21-24
SKILLED NURSING FACILITY							
Bathing room	Negative	N/R	10	Yes	N/R	N/R	70-75/21-24

Table 7-1 Notes:

w. ~~This requirement applies.~~ The requirement that all room air is exhausted directly to outdoors applies only to radiology waiting rooms programmed to hold patients who are waiting for chest x-rays for diagnosis of respiratory disease.



**BSR/ASHRAE/ASHE Addendum y
to ANSI/ASHRAE/ASHE Standard 170-2008**

Public Review Draft

**Proposed Addendum y to
Standard 170-2008, Ventilation of
Health Care Facilities**

**First Public Review (March 2013)
(Draft shows Proposed Changes to Current Standard)**

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

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BSR/ASHRAE/ASHE Addendum y to ANSI/ASHRAE/ASHE Standard 170-2008, *Ventilation of Health Care Facilities*
First Public Review Draft

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FOREWORD

This proposed addendum adds restrictions on the use of duct lining. These requirements are similar to those of the 2010 FGI Guidelines for the Design and Construction of Health Care Facilities, but have been clarified.

[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 y to 170-2008

Add a new Section 6.9 as shown below.

6.9 Insulation and Duct Lining

- a) An exterior vapor barrier shall be provided for insulation on cold surfaces. A vapor barrier is not required for insulation materials that do not absorb or transmit moisture.
- b) Existing insulation and duct lining accessible during a renovation project shall be inspected, repaired, and/or replaced, as appropriate.
- c) Duct lining shall not be used in ductwork located downstream of Filter Bank #2. Duct lining with an impervious cover may be allowed in terminal units, sound attenuators and air distribution devices downstream of Filter Bank #2. This lining and cover shall be factory-installed.
- d) Duct lining shall not be installed within 15 ft (4.57 m) downstream of humidifiers.



**BSR/ASHRAE/ASHE Addendum z
to ANSI/ASHRAE/ASHE Standard 170-2008**

Public Review Draft

**Proposed Addendum z to
Standard 170-2008, Ventilation of
Health Care Facilities**

**First Public Review (March 2013)
(Draft shows Proposed Changes to Current Standard)**

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BSR/ASHRAE/ASHE Addendum z to ANSI/ASHRAE/ASHE Standard 170-2008, *Ventilation of Health Care Facilities*
First Public Review Draft

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FOREWORD

This proposed addendum clarifies requirements for an Emergency Department examination/treatment room. The function of the Emergency Department examination/treatment room is described in FGI-2010 paragraph 2.2-3.1.3.6.

[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 z to 170-2008

Revise Table 7-1 as shown below. Table 7-1 and the notes were modified by several addenda to Standard 170-2008 currently published for free on the ASHRAE website at <http://www.ashrae.org/standards-research--technology/standards-addenda>. The remainder of Table 7-1 is unchanged.

Table 7-1 Design Parameters

Function of Space	Pressure Relationship to Adjacent Areas (n)	Minimum Outdoor ach	Minimum Total ach	All Room Air Exhausted Directly to Outdoors (j)	Air Recirculated by means of Room Units (a)	RH (k), (%)	Design Temperature (l), (°F/°C)
SURGERY AND CRITICAL CARE							
<u>Emergency Department exam/treatment room (p)</u>	<u>N/R</u>	<u>2</u>	<u>6</u>	<u>N/R</u>	<u>N/R</u>	<u>max 60</u>	<u>70-75/21-24</u>



**BSR/ASHRAE/ASHE Addendum ab
to ANSI/ASHRAE/ASHE Standard 170-2008**

Public Review Draft

**Proposed Addendum ab to
Standard 170-2008, Ventilation of
Health Care Facilities**

**First Public Review (March 2013)
(Draft shows Proposed Changes to Current Standard)**

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

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BSR/ASHRAE/ASHE Addendum ab to ANSI/ASHRAE/ASHE Standard 170-2008, *Ventilation of Health Care Facilities*
First Public Review Draft

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FOREWORD

This proposed addendum clarifies the Table 7-1 minimum requirements for Patient rooms. The Patient room table entry with footnote (s.) previously allowed 4 Minimum Total ACH for this space with the use of supplemental heating and/or cooling systems. The Patient room requirements have been clarified such that 4 Minimum Total ACH is the space requirement regardless of the use of supplemental heating and/or cooling systems. The last sentence of footnote (s.) was not revised by this addenda; it was relocated to a new footnote (x.) and reapplied to the same table entry for patient rooms.

[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 ab to 170-2008

Revise Table 7-1 and its notes as shown below. Table 7-1 footnote s. was modified by Addenda b and g to Standard 170-2008 currently published for free on the ASHRAE website at <http://www.ashrae.org/standards-research--technology/standards-addenda>. The remainder of Table 7-1 is unchanged.

Table 7-1 Design Parameters

Function of Space	Pressure Relationship to Adjacent Areas (n)	Minimum Outdoor ach	Minimum Total ach	All Room Air Exhausted Directly to Outdoors (j)	Air Recirculated by means of Room Units (a)	Design Relative Humidity (k), (%)	Design Temperature (l), (°F/°C)
INPATIENT NURSING							
Patient room (s)	N/R	2	<u>6.4 (x)</u>	N/R	N/R	max 60	70-75/21-24

- s. For ~~patient rooms~~, intermediate care, labor/delivery/recovery rooms and labor/delivery/recovery/postpartum rooms, four total ach shall be permitted when supplemental heating and/or cooling systems (radiant heating and cooling, baseboard heating, etc.) are used. ~~For single bed patient rooms using Group D diffusers, a minimum of six total air changes per hour shall be provided and calculated based on the volume from finished floor to 6 ft (1.83 m) above the floor.~~
- x. For single-bed patient rooms using Group D diffusers, a minimum of six total air changes per hour shall be provided and calculated based on the volume from finished floor to 6 ft (1.83 m) above the floor.



**BSR/ASHRAE/IES Addendum ag
to ANSI/ASHRAE/IES Standard 90.1-2010**

Public Review Draft

**Proposed Addendum ag to Standard
90.1-2010, *Energy Standard for
Buildings Except Low-Rise
Residential Buildings***

**Independent Substantive Change Public Review (April 2013)
(Draft shows Proposed Changes to Previous Public Review Draft)**

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FOREWORD

This is the second public review draft of a proposed addendum to establish guidelines for claiming energy savings that result from reduced infiltration in Appendix G. During the first public review draft there were a number of comments suggesting changes to some of the language used.

The ECB sub-committee agreed with these recommendations and has proposed the following changes to the original proposal. The proposed changes in this second public review draft clarify but do not change the original intent or technical approach of the original proposal.

[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 ag to 90.1-2010

Revise the Standard as follows (I-P and SI units)

G3. CALCULATION OF THE PROPOSED AND BASELINE BUILDING PERFORMANCE

TABLE G3.1 Modeling Requirements for Calculating Proposed and Baseline Building Performance

5. Building Envelope

Proposed Building Performance (Left Column)

b. *Infiltration shall be modeled using the same methodology, ~~and~~ air leakage rate and adjustments for weather and building operation in both the proposed design and the baseline design. These adjustments shall be made for each simulation time step and must account for but not be limited to weather conditions, and HVAC system operation, including strategies that are intended to positively pressurize the building. ~~Infiltration shall be adjusted to account for building pressurization, climate and HVAC operation, as applicable, using infiltration schedule adjustments within the energy model.~~ The peak air leakage rate of the building envelope (I_{75Pa}) at a fixed building pressure differential of 0.3" w.g.(75Pa) shall be 0.4 cfm/ft² (2.03L/s.m²) The peak air leakage rate of the building envelope shall be converted to appropriate units for the simulation program using one of the methods in G3.1.1.4.*

Exceptions:

1. When whole building air leakage testing, in accordance with ASTM E779-03, is specified during design and completed after construction, the *proposed design* air leakage rate of the building envelope shall be as measured.

G3.1.1.4 Modeling Building Envelope Infiltration.

The ~~peak~~ air leakage rate of the building envelope (I_{75Pa}) at a pressure differential of 0.3" w.g.(75Pa) shall be

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converted to appropriate units for the *simulation program* using one of the following formulas:

For methods describing ~~peak~~ infiltration as a function of floor area:

$$IFLR = 0.112 * I_{75Pa} * S / AFLR$$

For methods describing ~~peak~~ infiltration as a function of exterior wall area:

$$IEW = 0.112 * I_{75Pa} * S / AEW$$

When using the measured ~~peak~~ air leakage rate of the building envelope at a pressure differential of 0.3" w.g.(75Pa) for the proposed design, the ~~peak~~ air leakage rate shall be calculated as follows:

$$I_{75Pa} = Q/S$$

Where:

I_{75Pa} = air leakage rate of the building envelope expressed in cfm/ft² (L/s.m²) at a fixed building pressure differential of 0.3" w.g. or 1.57 psf (75 Pa).

Q = volume of air in cubic feet per minute (liters per second) flowing through the whole building envelope when subjected to an indoor/outdoor pressure differential of 0.3" w.g. or 1.57 psf (75 Pa) in accordance with ASTM E 779.

S = the total area of the envelope air pressure boundary including the lowest floor, any below grade walls, above-grade walls, and roof (or ceiling) (including windows and skylights) separating the interior conditioned space from the unconditioned environment measured in square feet (square meters),

IFLR = Adjusted air leakage rate of the building envelope at a reference wind speed of 10 mph (4.47m/s) and the above ground exterior wall area.

AFLR= the total gross floor area measured in square feet (square meters)

IEW = Adjusted air leakage rate of the building envelope at a reference wind speed of 10 mph (4.47m/s) and the above ground exterior wall area measured in square feet (square meters).

AEW= the total above grade exterior wall area measured in square feet (square meters)

Exception:

1. An multizone airflow model or other alternate method to model building envelope infiltration may be used provided the following criteria are met:
 - a. If the calculations are done independently from the energy simulation program ~~The proposed method must comply with G2.5 Exceptional Calculation Method. has been publicly peer reviewed.~~
 - ~~b. The method calculates infiltration on an hourly basis directly within the simulation program.~~
 - b.e. The method for converting the air leakage rate of the building envelope at 0.3" w.g. or 1.57 psf (75 Pa) to the appropriate units for the *simulation program* is fully documented and submitted to the rating authority for approval.

12. NORMATIVE REFERENCES

Add to Section 12, under "American Society for Testing and Materials"

ASTM E779-0310

Standard Test Method for Determining Air Leakage Rate by Fan Pressurization



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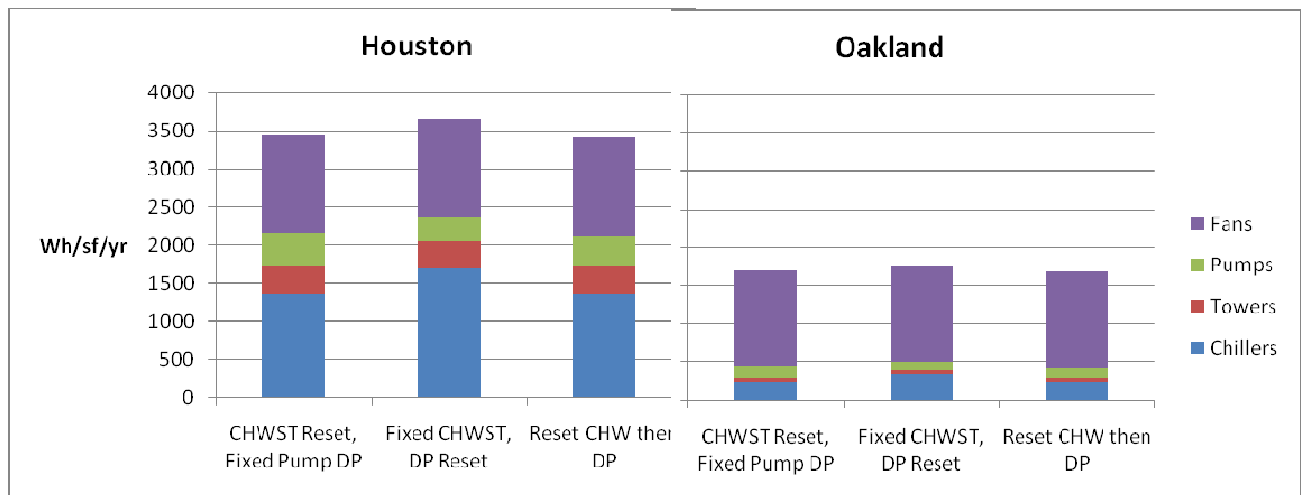
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FOREWORD

This addendum is intended to address these issues:

1. The scope to 6.5.4.1 is now limited to heating and cooling hydronic systems since Section 6.5.4.4. addresses condenser water systems.
2. Exception 1 to 6.5.4.1 was unclear and could exempt all systems that have flow limitations for primary equipment such as all chillers and most boilers. When chillers are selected for large ΔT , it is not uncommon for the minimum flow to be greater than 50% of the design flow, but there is still value in using variable flow distribution. So rather than exempt systems with flow limitations from complying with the entire section, the flow limits are incorporated into the first sentence. Minimum flow can be met by minimum flow bypass, primary/secondary pumping, and (for one chiller/one boiler systems) by a few 3-way valves.
3. The 50% lower flow limit is reduced to 25%. Other than the equipment flow limitations, the only other reason not to go to zero flow is to “engage the mass” of water in the piping system to reduce short cycling of chillers and boilers and to prevent pump deadheading. All that is required are some end-of-run 3-way valves. The 25% value is conservatively high for these purposes.
4. Exception 2 to 6.5.4.1 is also incorporated into the first sentence.
5. The 10 HP size exception is eliminated. There is really no size limit to this section since in most applications, variable flow systems are less expensive than constant flow systems since 2-way valves are less expensive than 3-way valves and VFDs on pumps are not required on how water systems and small chilled water systems. Small systems with one chiller or boiler can meet the requirement as revised by using 2-way valves everywhere except for enough 3-way valves to maintain minimum chiller/boiler flow. Multiple chiller/boiler systems are inherently large enough to handle the cost of bypasses etc. required for variable flow.
6. Currently 6.5.4.1 requires DP setpoint reset using valve position for DDC systems and CHW reset is not required when variable flow is used due to exception 2 in 6.5.4.3. This addendum revises this to allow valve position either to be used for DP setpoint reset or for CHW setpoint reset. For systems with high pump heads, using a constant CHW setpoint can be the most efficient option. But for low head pumping systems, CHW setpoint reset will be the best option, particularly in mild climates, because chiller energy savings due to reduced lift offsets the pump energy increase due to warmer supply water temperatures, as shown in the figure below. Because the optimum logic varies, this addendum allows the design engineer to choose either option, and even to reset both simultaneously as shown in this figure.



7. Exception 1 to 6.5.4.3 is proposed to be deleted since there are really no comfort HVAC applications we can think of that require an exact single setpoint all the time (an exception is provided for process applications). There will always be a range of temperatures that work and reset always saves energy. The large majority of boiler and chiller

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controllers (particularly those larger than 300000 Btuh) have the capability to reset supply temperature setpoint based on return water temperature (in fact many small chiller controllers can only control off of return water temperature) and include an option for outdoor air temperature reset for which the only added cost is installing a \$35 thermistor outside. So there is thus a zero or small cost to comply with this requirement. One can simply limit the range of the reset to what the user thinks is needed but whatever the range is, it will be cost effective given there is little or no cost for this capability.

8. Valve position reset of CHW and HW temperature is proposed to be required for DDC systems, as noted above. The range of the reset includes a clause "setpoint limits of the ...application have been reached". This is to allow someone to limit the reset for some perceived application limitation, one of the most common of which is dehumidification. In fact, there is no reason to limit reset for dehumidification when valve position is used since almost the same supply air humidity condition (near saturation) will result when supply air temperature is maintained regardless of chilled water temperature. This will be explained in the user's manual. This clause is included anyway to avoid negative feedback from those who might come up with an application that has temperature limits.
9. An exception is added to eliminate chilled water reset for systems where the water is already cold such as district cooling or TES. Reset in this case will actually increase energy usage by increasing pump energy without any commensurate reduction in chiller energy.

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Addendum ak to 90.1-2010

Revise the Standard as follows (S-I and I-P units)

6.5.4.1 Hydronic Variable Flow Systems. ~~HVAC pumping~~ Chilled and hot water distribution systems having a total pump system power exceeding 10 hp [7.5 kW] that include 3 or more control valves designed to modulate or step open and close as a function of load shall be designed for variable fluid flow and shall be capable of reducing pump flow rates to no more than the larger of 50% or less of the design flow rate or the minimum flow required by the heating/cooling equipment manufacturer for the proper operation of equipment. Individual chilled water pumps serving variable flow systems having motors exceeding 5 hp [3.7 kW] shall have controls and/or devices (such as variable speed control) that will result in pump motor demand of no more than 30% of design wattage at 50% of design water flow. The controls or devices shall be controlled as a function of desired flow or to maintain a minimum required differential pressure. Differential pressure shall be measured at or near the most remote heat exchanger or the heat exchanger requiring the greatest differential pressure. The differential pressure setpoint shall be no more than 110% of that required to achieve design flow through the heat exchanger. Where differential pressure control is used to comply with this section and DDC controls are used the setpoint shall be reset downward based on valve positions until one valve is nearly wide open.

Exceptions: Differential pressure setpoint reset is not required where valve position is used to comply with 6.5.4.3.

- a. ~~Systems where the minimum flow is less than the minimum flow required by the equipment manufacturer for the proper operation of equipment served by the system, such as chillers, and where total pump system power is 75 hp or less.~~
- b. ~~Systems that include no more than three control valves.~~

...

6.5.4.3 Chilled- and Hot- Water Temperature Reset Controls. Chilled- and hot- water systems with a design capacity exceeding 300,000 Btu/h [90kW] supplying chilled or heated water (~~or both~~) to comfort conditioning systems shall include controls that automatically reset supply water temperatures by representative building loads (including return water

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temperature) or by outdoor air temperature. Where DDC is used to control valves, the setpoint shall be reset based on valve positions until one valve is nearly wide open or setpoint limits of the system equipment or application have been reached.

Exceptions:

~~a. Where the supply temperature reset controls cannot be implemented without causing improper operation of heating, cooling, humidifying, or dehumidifying systems.~~

~~b. Hydronic systems, such as those required by Section 6.5.4.1 that use variable flow to reduce pumping energy:~~

~~a. Where chilled water supply is already cold, such as chilled water supplied from a district cooling or thermal energy storage system, such that blending would be required to achieve the reset chilled water supply temperature.~~

~~b. Where a specific temperature is required for a process.~~

~~c. Water temperature reset is not required where valve position is used to comply with 6.5.4.1.~~



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FOREWORD

Based upon public review comments we have reduced the scope of this proposal to cover door switches only. The intent of this measure is to reduce unnecessary use of energy for heating or cooling of additional un-tempered air if an operable door is left open outside of times when it is beneficial to leave it open. This is accomplished with a simple mechanical switch that integrates the HVAC system operation with operable door position.

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Addendum ba to 90.1-2010

Revise the Standard as follows (IP units)

6.3.2 Criteria

- r. The system complies with the door ~~window~~-switch requirements in section 6.5.10.

6.5.10 Door ~~Window~~ Switches. Any conditioned space with a door, including doors with more than one-half glass, ~~operable wall or roof~~ openings to the outdoors shall be provided with controls that, when any such ~~opening~~ door is open:

1. Disable mechanical heating or reset the heating set point to 55°F or lower within 5 minutes of the door opening.
2. Disable mechanical cooling or reset the cooling set point to 90°F or greater within 5 minutes of the door opening. Mechanical cooling may remain enabled if outside air temperature is below space temperature.

Exceptions:

- a. Building entries with *automatic* closing devices
- b. Any space without a thermostat
- c. Alterations to existing buildings
- d. Loading docks

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Revise the Standard as follows (SI units)

6.3.2 Criteria

- r. The system complies with the ~~door window~~-switch requirements in section 6.5.10.

6.5.10 ~~Door Window~~ Switches. Any conditioned space with a door, including doors with more than one-half glass, operable wall or roof openings to the outdoors shall be provided with controls that, when any such ~~opening door~~ is open:

1. Disable mechanical heating or reset the heating set point to 13°C or lower within 5 minutes of the door opening.
2. Disable mechanical cooling or reset the cooling set point to 32°C or greater within 5 minutes of the door opening. Mechanical cooling may remain enabled if outside air temperature is below space temperature.

Exceptions:

- a. Building entries with *automatic* closing devices
- b. Any space without a thermostat
- c. Alterations to existing buildings
- d. Loading docks



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FOREWORD

Chapter 11 and Appendix G require the user to remove fan energy from equipment where the fan energy is included in the energy efficiency rating of the equipment. A method for removing the fan energy was not previously included in the standard. This addendum includes a methodology for removing the fan energy from packaged equipment efficiency ratings

Addendum BL to 90.1-2010

Revise the Standard as follows (IP Units)

11.3.2 HVAC Systems.

- c. Where *efficiency* ratings include supply fan energy, the *efficiency* rating shall be adjusted to remove the supply fan energy from the *efficiency* rating. For Budget System Types 3, 4, 6, 8, 9, 10, and 11 calculate the minimum $COP_{nfc\text{ooling}}$ and $COP_{nf\text{heating}}$ using the equation for the applicable performance rating as indicated in Table 6.8.1A-D. Where a full load and part load efficiency rating is provided in Tables 6.8.1 the full load equation below shall be used.

$$COP_{nfc\text{ooling}} = \underline{0.33 * EER - 7.84E-8 * EER * Q + 0.338 * EER}$$

$$COP_{nfc\text{ooling}} = \underline{-0.0061 * SEER^2 + 0.37 * SEER - 0.0076 * SEER^2 + 0.3796 * SEER}$$

$$COP_{nf\text{heating}} = \underline{1.48E-7 * COP_{47} * Q + 1.062 * COP_{47}} \text{ (applies to heat pump heating efficiency only)}$$

$$COP_{nf\text{heating}} = \underline{0.46 * HSPF - 0.0296 * HSPF^2 + 0.7134 * HSPF}$$

Where:

$COP_{nfc\text{ooling}}$ and $COP_{nf\text{heating}}$ = The respective packaged HVAC equipment cooling and heating energy *efficiency* to be used in the *budget building design* which excludes supply fan power.

Q = AHRI rated cooling capacity in btu/h.

EER, SEER, COP, HSPF shall be at AHRI test conditions.

Fan energy shall be modeled separately according to section 11.3.2h. Supply and return/relief system fans shall be modeled as operating at least whenever the spaces served are occupied except as specifically noted in Table 11.3.2A.

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Table 11.3.1, Section 10., Proposed Building Design (Column A)

- b. Where an HVAC system has been designed, the HVAC model shall be consistent with design documents. Mechanical equipment efficiencies shall be adjusted from actual design condition to the standard rating conditions specified in Section 6.4.1, if required by the simulation model. Where *efficiency* ratings include supply fan energy, the *efficiency* rating shall be adjusted to remove the supply fan energy from the *efficiency* rating in the budget building systems. ~~When AHRI supply fan power for the proposed building packaged HVAC equipment is unavailable, the methodology in Section 11.3.2 HVAC Systems shall be used to remove fan energy from the efficiency rating. The above equations shall not be used in the proposed building. The proposed building HVAC system shall be modeled using manufacturer's full and part load data for the HVAC system without fan power.~~

TABLE 11.3.2A Budget System Descriptions

System No.	System Type	Fan Control	Cooling Type	Heating Type
1	VAV with parallel fan-powered boxes ^a	VAV ^d	Chilled water ^e	Electric Resistance
2	VAV with reheat ^b	VAV ^d	Chilled water ^e	Hot-water fossil fuel boiler ^f
3	Packaged VAV with parallel fan-powered boxes ^a	VAV ^d	Direct Expansion ^c	Electric Resistance
4	Packaged VAV with reheat ^b	VAV ^d	Direct Expansion ^c	Hot-water fossil fuel boiler ^f
		Constant Volume		
5	Two-pipe fan-coil	<u>Single or Two Speed Fan</u> ^{i,j}	Chilled water ^e	Electric Resistance
		Constant Volume		
6	Water-source heat pump	<u>Single or Two Speed Fan</u> ^{i,j}	Direct Expansion ^c	Electric heat pump and boiler ^g
		Constant Volume		
7	Four-pipe fan-coil	<u>Single or Two Speed Fan</u> ^{i,j}	Chilled water ^e	Hot-water fossil fuel boiler ^f
		Constant Volume		
8	Packaged terminal heat pump	<u>Single Speed Fan</u> ⁱ	Direct Expansion ^c	Electric heat pump ^h
		Constant Volume		
9	Packaged rooftop heat pump	<u>Single or Two Speed Fan</u> ^{i,j}	Direct Expansion ^c	Electric heat pump ^h
		Constant Volume		
10	Packaged terminal air conditioner	<u>Single Speed Fan</u> ⁱ	Direct Expansion ^c	Hot-water fossil fuel boiler ^f
		Constant Volume		
11	Packaged rooftop air conditioner	<u>Single or Two Speed Fan</u> ^{i,j}	Direct Expansion ^c	Fossil fuel furnace

- i. ~~**Constant volume Fan System Operation:** Fans shall be controlled in the same manner as in the proposed building design; i.e., fan operation whenever the space is occupied or fan operation cycled on calls for heating and cooling. If the fan is modeled as cycling and the fan energy is included in the energy efficiency rating of the equipment, fan energy shall not be modeled explicitly.~~
- j. **Fan Speed Control:** Fans shall operate as one or two speed as required by section 6.5.3.2 regardless of the fan speed control used in the *proposed building*.

G3.1.2.1 Equipment Efficiencies. All HVAC equipment in the *baseline building design* shall be modeled at the minimum *efficiency* levels, both part load and full load, in accordance with Section 6.4. Where *efficiency* ratings include supply fan energy, the *efficiency* rating shall be adjusted to remove the supply fan energy from the *efficiency* rating. For Baseline HVAC Systems 1, 2, 3, 4, 5, and 6 calculate the minimum $COP_{nfcooling}$ and $COP_{nfheating}$ using the equation for the applicable

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performance rating as indicated in Table 6.8.1A-D. Where a full load and part load efficiency rating is provided in Tables 6.8.1 the full load equation below shall be used.

$$COP_{nfcooling} = 0.33 * EER - 7.84E-8 * EER * Q + 0.338 * EER$$

$$COP_{nfcooling} = -0.0061 * SEER^2 + 0.37 * SEER - 0.0076 * SEER^2 + 0.3796 * SEER$$

$$COP_{nfheating} = 1.07 * COP_{47} - 1.48E-7 * COP_{47} * Q + 1.062 * COP_{47} \text{ (applies to heat pump heating efficiency only)}$$

$$COP_{nfheating} = 0.46 * HSPF - 0.0296 * HSPF^2 + 0.7134 * HSPF$$

Where:

$COP_{nfcooling}$ and $COP_{nfheating}$ = The respective packaged HVAC equipment cooling and heating energy efficiency to be used in the *baseline building* which excludes supply fan power.

EER, SEER, COP, HSPF shall be at AHRI test conditions.

Q = AHRI rated cooling capacity in btu/h.

Fan energy shall be modeled separately according to section G3.1.2.10.

Table G3.1, Section 10., Proposed Building Performance

- b. Where an HVAC system has been designed, the HVAC model shall be consistent with design documents. Mechanical equipment efficiencies shall be adjusted from actual design condition to the standard rating conditions specified in Section 6.4.1, if required by the simulation model. Where *efficiency* ratings include supply fan energy, the *efficiency* rating shall be adjusted to remove the supply fan energy from the *efficiency* rating in the *baseline building* systems. ~~When AHRI supply fan power for the *proposed building* packaged HVAC equipment is unavailable, the methodology in Section G3.2.1 shall be used to remove fan energy from the *efficiency* rating.~~ The above equations shall not be used in the *proposed building*. The *proposed building* HVAC system shall be modeled using manufacturer's full and part load data for the HVAC system without fan power.



**BSR/ASHRAE/IES Addendum dp
to ANSI/ASHRAE/IES Standard 90.1-2010**

1st Public Review Draft
Proposed Addendum dp to Standard
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FOREWORD

This addendum modifies language introduced in addendum ar to 90.1-2010, specifically it revises the definition of “walk-in cooler” to match the temperature definitions in federal regulations (Title 10 - Energy. CHAPTER II - DEPARTMENT OF ENERGY. SUBCHAPTER D - ENERGY CONSERVATION. PART 431 - ENERGY EFFICIENCY PROGRAM FOR CERTAIN COMMERCIAL AND INDUSTRIAL EQUIPMENT. Subpart R - Walk-in Coolers and Walk-in Freezers. § 431.302 Definitions concerning walk-in coolers and walk-in freezers.)

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and strikethrough (for deletions) unless the instructions specifically mention some other means of indicating the changes. Only these changes are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed substantive changes.

Addendum DP to 90.1-2010

Revise the Standard as follows (I-P units)

3.2 Definitions

walk-in cooler: an enclosed storage space of less than 3,000 square feet, designed to maintain space at greater than 32°F ~~but~~ and less than or equal to 55°F that can be walked into.

Revise the Standard as follows (SI units)

3.2 Definitions

walk-in cooler: an enclosed storage space of less than 280 square meters, designed to maintain space at greater than 0°C ~~but~~ and less than or equal to 13°C that can be walked into.



**BSR/ASHRAE/IES Addendum dq
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FOREWORD

This addendum is in response to a CMP. The economic analysis did not extend above 24" pipe size, so requirements for larger pipes have been eliminated.

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Addendum dq to 90.1-2010

Revise the Standard as follows:

Table 6.5.4.5: Piping System Design Maximum Flow Rate in GPM (IP)

Operating hours/yr	<=2000 hours/yr		>2000 and <=4400 hours/year		>4400 and <=8760 hours/year	
	Other	Variable Flow/ Variable Speed	Other	Variable Flow/ Variable Speed	Other	Variable Flow/ Variable Speed
Nominal Pipe Size (in.)						
2 1/2	120	180	85	130	68	110
3	180	270	140	210	110	170
4	350	530	260	400	210	320
5	410	620	310	470	250	370
6	740	1100	570	860	440	680
8	840	1300	650	970	510	770
10	1800	2700	1300	2000	1000	1600
12	2500	3800	1900	2900	1500	2300
Maximum Velocity for Pipes Over 12-14 -24" in Size	8.5 fps	13.0 fps	6.5 fps	9.5 fps	5.0 fps	7.5 fps

Table 6.5.4.5: Piping System Design Maximum Flow Rate in liters/second (SI)

Operating hours/yr	<=2000 hours/yr	>2000 and <=4400 hours/year	>4400 and <=8760 hours/year
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DN Pipe Size (mm)	Other	Variable Flow/ Variable Speed	Other	Variable Flow/ Variable Speed	Other	Variable Flow/ Variable Speed
75	8	11	5	8	4	7
90	11	17	9	13	7	11
110	22	33	16	25	13	20
140	26	39	20	30	16	23
160	47	69	36	54	28	43
225	53	82	41	61	32	49
280	114	170	82	126	63	101
315	158	240	120	183	95	145
Maximum Velocity for Pipes Over 315 355- 610 mm Size	2.6 m/s	4.0 m/s	2.0 m/s	2.9 m/s	1.5 m/s	2.3 m/s



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FOREWORD

This addendum modifies the definition of building entrance for clarity.

[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 dr to 90.1-2010

Revise definition of building entrance as follows (IP and SI Units):

building entrance: any doorway, set of doors, ~~turnstile~~ revolving door, vestibule, or other form of portal that is ordinarily used to gain access to the *building* or to exit from the *building* by its users and occupants. This does not include doors solely used to directly enter mechanical, electrical and other *building* utility service equipment rooms.



**BSR/ASHRAE/IES Addendum dt
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Public Review Draft

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FOREWORD

This addendum was generated in response to a continuous maintenance proposal to remove requirements to control lighting that is not part of the building permit to exempt some sign lighting in the lighting control wattage calculation.

[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 dt to 90.1-2010

Modify the standard as follows (IP and SI Units)

4.1.7 Exterior Lighting Control. Lighting for exterior applications not exempted in section 9.1 shall meet the following requirements:

- a. Lighting shall be controlled by a device that automatically turns off the lighting when sufficient daylight is available.
- b. All building façade and landscape lighting shall be automatically shut off between midnight or business closing, whichever is later, and 6am or business opening, whichever comes first, or between times established by the *authority having jurisdiction*.
- c. Lighting not specified in section b above, ~~including and lighting for advertising signage~~, shall be controlled by a device that automatically reduces the connected lighting power by at least 30% for at least one of the following conditions
 1. from 12 midnight or within one (1) hour of the end of business operations, whichever is later, until 6am or business opening, whichever is earlier; or
 2. during any period when no activity has been detected for a time of no longer than 15 minutes.

All time switches shall be capable of retaining programming and the time setting during loss of power for a period of at least ten hours.

Exceptions:

1. Lighting for covered vehicle entrances or exits from buildings or parking structures where required for safety, security, or eye adaptation.
2. Lighting that is integral to signage and installed in the signage by the manufacturer

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9.4.3 Exterior Building Lighting Power. The total *exterior lighting power allowance* for all exterior building applications is the sum of the base site allowance plus the individual allowances for areas that are designed to be illuminated and are permitted in Table 9.4.3B for the applicable lighting zone. The *installed exterior lighting power* identified in accordance with Section 9.1.3 shall not exceed the *exterior lighting power allowance* developed in accordance with this section. Trade-offs are allowed only among exterior lighting applications listed in the Table 9.4.3B “Tradable Surfaces” section. The lighting zone for the building exterior is determined from Table 9.4.3A unless otherwise specified by the local jurisdiction.

Exceptions:

1. Lighting used for the following exterior applications is exempt when equipped with a *control device* that complies with the requirements of Section 9.4.1.7 and is independent of the control of the nonexempt lighting:
 - ~~a. Specialized signal, directional, and marker lighting associated with transportation~~
 - b. Lighting that is integral to signage and installed in the signage by the manufacturer~~Advertising signage or directional signage.~~
 - ~~c. Lighting integral to *equipment* or instrumentation and installed by its *manufacturer*.~~
 - ~~d. Lighting for theatrical purposes, including performance, stage, film production, and video production.~~
 - e. Lighting for athletic playing areas.
 - ~~f. Temporary lighting.~~
 - g. Lighting for industrial production, material handling, transportation sites, and associated storage areas.
 - h. Theme elements in theme/amusement parks.
 - i. Lighting used to highlight features of public monuments and registered *historic* landmark structures or *buildings*.
 - ~~j. Lighting for hazardous locations.~~
 - k. Lighting for ~~swimming pools and~~ water features.
 - ~~l. Searchlights.~~

2. Lighting used for the following exterior applications is exempt when controlled separately:
 - a. Specialized signal, directional, and marker lighting associated with transportation.
 - b. Lighting integral to *equipment* or instrumentation and installed by its *manufacturer*.
 - c. Lighting for theatrical purposes, including performance, stage, film production, and video production.
 - d. Temporary lighting.
 - e. Lighting for hazardous locations.
 - m. Lighting for swimming pools
 - n. Searchlights



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FOREWORD

This addendum requires water-side economizers for chilled water systems including non-fan systems such as radiant cooling or passive chilled beam systems and for systems with small individual chilled-water fan systems such as fan coils or chilled beams. Provisions are added to avoid implementations that result in excessive heat rejection energy.

An economic analysis found the addition of water economizers to be cost effective for the cooling capacities required in the proposal except in climate zone 1A.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and strikethrough (for deletions) unless the instructions specifically mention some other means of indicating the changes. Only these changes are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed substantive changes.

Addendum du to 90.1-2010

Revise the Standard as follows (IP & SI Units):

6.5.1 Economizers. Each cooling system ~~that has a fan~~ shall include either an *air* or *water economizer* meeting the requirements of Sections 6.5.1.1 through 6.5.1.4.

Exceptions: Economizers are not required for the systems listed below.

- a. Individual fan-cooling units with a supply capacity less than the minimum listed in Table 6.5.1A for comfort cooling applications or ~~and~~ Table 6.5.1B for *computer room applications* that either:
 1. have direct expansion cooling coils, or
 2. where the total building chilled water system capacity, minus the capacity of fan units with *air economizers*, is less than the system capacity listed in Table 6.5.1C.
- b. Chilled-water cooling systems that are passive (without a fan) or use induction where the total chilled water system capacity, minus the capacity of fan units with *air economizers*, is less than the system capacity listed in Table 6.5.1C.

[Renumber existing exceptions b-k and add Table 6.5.1C]

BSR/ASHRAE/IES Addendum du to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
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TABLE 6.5.1C Chilled-Water System Cooling Capacity for which an Economizer is Required

<u>Climate Zones</u>	<u>Total Building Chilled Water System Capacity, Minus Capacity of Cooling Units with Air Economizers</u>	
	<u>Building Water-Cooled Chilled Water Systems</u>	<u>Air-cooled Chilled Water Systems or District Chilled Water Systems</u>
1a	<u>No economizer requirement</u>	<u>No economizer requirement</u>
1b, 2a, 2b	<u>≥ 960,000 Btu/h (280 kW)</u>	<u>≥ 1,250,000 Btu/h (365 kW)</u>
3a, 3b, 3c, 4a, 4b, 4c	<u>≥ 720,000 Btu/h (210 kW)</u>	<u>≥ 940,000 Btu/h (275 kW)</u>
5a, 5b, 5c, 6a, 6b, 7, 8	<u>≥ 1,320,000 Btu/h (385 kW)</u>	<u>≥ 1,720,000 Btu/h (505 kW)</u>

...

6.5.1.2.2 Maximum Hydronic Pressure Drop. Precooling coils and water-to-water heat exchangers used as part of a *water economizer* system shall either have a water-side pressure drop of less than 15 feet ft of water or a secondary loop shall be created so that the coil or heat exchanger pressure drop is not seen by the circulating pumps when the system is in the normal cooling (non_economizer) mode.

6.5.1.2.3 Heat Rejection Fan Energy Impact. Heat rejection for *water economizers* shall be configured such that:

1. no added heat-rejection fan energy is used when the *water economizer* is not in operation, or
2. air-cooled chillers with *water economizer* heat rejection coils in series with the refrigerant condenser coils meet the *efficiency* ratings listed in Table 6.8.1C.



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FOREWORD

The current wording of the Pump Isolation section (which dates back to the 1999 issue) says:

6.5.4.2 Pump Isolation. When a chilled-water plant includes more than one chiller, provisions shall be made so that the flow in the chiller plant can be automatically reduced, correspondingly, when a chiller is shut down. Chillers referred to in this section, piped in series for the purpose of increased temperature differential, shall be considered as one chiller.

When a boiler plant includes more than one boiler, provisions shall be made so that the flow in the boiler plant can be automatically reduced, correspondingly, when a boiler is shut down

In the 1989 version said:

When a chilled water plant includes more than one chiller, no less than a corresponding number of chilled and condenser water pumps shall be provided, and either the piping arrangement or automatic valves shall allow a chilled and condenser water pump pair to shut off when one of the chillers shuts off. When a boiler plant includes more than one boiler, no less than a corresponding number of hot water pumps shall be provided, and either the piping arrangement or automatic valves shall allow a hot water pump to shut off when one of the boilers shuts off.

This was written around the assumption that pumps are constant speed which was the predominate practice at the time. The rewording was revised in the 1999 version apparently to address this problem.

California's Title 24 Energy Standards have similar requirements:

2. **Chiller Isolation.** When a chilled water ~~plant system~~ includes more than one chiller, provisions shall be made so that flow through any chiller is automatically shut off when that chiller is shut off while still maintaining flow through other operating chiller(s). Chillers that are piped in series for the purpose of increased temperature differential shall be considered as one chiller.
3. **Boiler Isolation.** When a hot water plant includes more than one boiler, provisions shall be made so that flow through any boiler is automatically shut off when that boiler is shut off while still maintaining flow through other operating boiler(s).

The 1989 wording addressed two benefits of pump isolation:

1. To reduce pump water flow to reduce pump energy.
2. To shut off flow through inactive chillers/boilers. This prevents dilution of the supply water temperature caused by flow through an inactive machine, which reduces efficiency in the active machines. For some boilers, it also prevents the boiler from losing heat up the flue.

The Title 24 wording exclusively addresses the second issue while the current wording of Section 6.5.4.2 only addresses the first. Since Section 6.5.4.1 requires most systems to be variable flow and since system flow rate for variable flow systems is more a function of valve demand than of how many pumps are on, arguably the second issue is more important, yet it is not addressed in the current standard. The first issue only needs be addressed for constant flow systems where pumps are staged with the chillers or boilers. This addendum revises the current

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wording accordingly. An exception is added for chiller plant pumps where it is possible that running fewer condenser water pumps can improve plant performance in cool weather.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and strikethrough (for deletions) unless the instructions specifically mention some other means of indicating the changes. Only these changes are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed substantive changes.

Addendum dv to 90.1-2010

Revise the Standard as follows (IP and SI Units)

6.5.4.2 Chiller and Boiler Pump Isolation

6.5.4.2.1 When a chilled-water plant includes more than one chiller, provisions shall be made so that ~~the~~ all fluid flow through in the chiller plant can be is automatically ~~reduced shut off, correspondingly,~~ when ~~a the~~ chiller is shut down. Chillers ~~referred to in this section,~~ piped in series for the purpose of increased temperature differential, shall be considered as one chiller. Where constant speed chilled water or condenser water pumps are used to serve multiple chillers, the number of pumps shall be no less than the number of chillers and staged on and off with the chillers.

6.5.4.2.2 When a boiler plant includes more than one boiler, provisions shall be made so that the flow ~~through in~~ the boiler ~~plant can be is~~ automatically ~~reduced, shut off correspondingly,~~ when ~~a the~~ boiler is shut down. Where constant speed hot water pumps are used to serve multiple boilers, the number of pumps shall be no less than the number of boilers and staged on and off with the boilers.



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to ANSI/ASHRAE/IES Standard 90.1-2010**

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**Proposed Addendum dw to Standard
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**First Public Review (April 2013)
(Draft shows Proposed Changes to Current Standard)**

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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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FOREWORD

Analysis has shown that temperature and humidity sensor measurement error has a large impact on energy performance of air economizer high limit devices. The analysis shows that by far the most reliable device is the simply dry-bulb switch. Even with $\pm 2^\circ\text{F}$ error, it is the best in most climates at set points that are adjusted by climate, lower in humid climates and higher in dryer climates. Differential enthalpy sensors can have the worst performance of all devices because they have four sensors (return air dry bulb and RH and outdoor air dry-bulb and RH) each of which can have error. This is true even with very accurate RH sensors, but studies at the Iowa Energy Center have shown that actual accuracy is much worse than nominal accuracy. Thus to ensure enthalpy high limits maintain good performance despite sensor error and when coils are dry, this addendum requires that they be used along with fixed dry bulb switches.

Fixed dry-bulb switches set to 65°F in humid climates are reinstated. They was allowed in the 2007 and earlier versions of the Standard at this setpoint. They were eliminated in 2010 due to concerns about high resulting space humidity, but that concern only applies to single compressor DX units with two stage thermostats and the impact is minimized by the low 65°F setpoint. With fully integrated economizers, high limit switches have no space humidity impact.

Electronic enthalpy switches are eliminated because they have been supplanted in the marketplace by better performing and lower cost switches that use superior fixed enthalpy plus fixed dry-bulb logic.

The dewpoint high limit that was added in the 2004 version is also proposed to be deleted since does not make sense theoretically and did not perform well in our simulations.

The addendum also adds tolerances to the high limit change over sensors which are aligned with tolerances recently added to the Title 24 2013 standard

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and strikethrough (for deletions) unless the instructions specifically mention some other means of indicating the changes. Only these changes are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed substantive changes.

Addendum dw to 90.1-2010

Revise the Standard as follows (IP & SI Units):

TABLE 6.5.1.1.3A ~~High-Limit Shutoff Control Options for Air Economizers~~

Climate Zones	Allowed Control Types	Prohibited Control Types
1b, 2b, 3b, 3c, 4b, 4c, 5b, 5c, 6b, 7, 8	Fixed dry bulb Differential dry bulb Electronic enthalpy^a Differential enthalpy Dew point and dry bulb temperatures	Fixed enthalpy

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1a, 2a, 3a, 4a	Fixed dry bulb Fixed enthalpy Electronic enthalpy ^a Differential enthalpy Dew point and dry bulb temperatures	Fixed dry bulb Differential dry bulb
5a and 6a	Fixed dry bulb Differential dry bulb Fixed enthalpy Electronic enthalpy ^a Differential enthalpy Dew point and dry bulb temperatures	

^aElectronic enthalpy controllers are devices that use a combination of humidity and dry bulb temperature in their switching algorithm.

TABLE 6.5.1.1.3B High-Limit Shutoff Control Settings- Options and Setpoints for Air Economizers (IP Units)

Device Control Type	Allowed only in Climate Zone at listed Setpoint	Required High Limit Setpoint (Economizer Off When):	
		Equation	Description
Fixed dry-bulb temperature	1b, 2b, 3b, 3c, 4b, 4c, 5b, 5c, 6b, 7, 8	$T_{OA} > 75^{\circ}\text{F}$	Outdoor air temperature exceeds 75°F
	5a, 6a	$T_{OA} > 70^{\circ}\text{F}$	Outdoor air temperature exceeds 70°F
	1a, 2a, 3a, 4a,	$T_{OA} > 65^{\circ}\text{F}$	Outdoor air temperature exceeds 65°F
Differential dry-bulb temperature	1b, 2b, 3b, 3c, 4b, 4c, 5a, 5b, 5c, 6a, 6b, 7, 8	$T_{OA} > T_{RA}$	Outdoor air temperature exceeds return air temperature
Fixed enthalpy with fixed dry-bulb temperature	2a, 3a, 4a, 5a, 6a All	$h_{OA} > 28$ Btu/lb ^a or $T_{OA} > 75$	Outdoor air enthalpy exceeds 28 Btu/lb ^a or Outdoor air temperature exceeds 75°F
Electronic enthalpy	All	$(T_{OA}, RH_{OA}) \Rightarrow A$	Outdoor air temperature/RH exceeds the “A” setpoint curve ^b
Differential enthalpy with fixed dry-bulb temperature	All	$h_{OA} > h_{RA}$ or $T_{OA} > 75$	Outdoor air enthalpy exceeds return air enthalpy or Outdoor air temperature exceeds 75°F
Dew point and dry bulb temperatures	All	$DP_{out} > 55^{\circ}\text{F}$ or $T_{out} > 75^{\circ}\text{F}$	Outdoor air dry bulb exceeds 75°F or outside dew point exceeds 55°F (65 gr/lb)

^aAt altitudes substantially different than sea level, the Fixed Enthalpy limit shall be set to the enthalpy value at 75°F and 50% relative humidity. As an example, at approximately 6000 ft elevation the fixed enthalpy limit is approximately 30.7 Btu/lb.

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^b Setpoint "A" corresponds to a curve on the psychrometric chart that goes through a point at approximately 75°F and 40% relative humidity and is nearly parallel to dry bulb lines at low humidity levels and nearly parallel to enthalpy lines at high humidity levels.

^b Devices with selectable (rather than adjustable) setpoints shall be capable of being set to within 2°F and 2 Btu/lb of the setpoint listed.

TABLE 6.5.1.1.3B High-Limit Shutoff Control Settings- Options and Setpoints for Air Economizers (SI Units)

Device Control Type	Allowed only in Climate Zone at listed Setpoint	Required High Limit Setpoint (Economizer Off When):	
		Equation	Description
Fixed dry-bulb temperature	1b, 2b, 3b, 3c, 4b, 4c, 5b, 5c, 6b, 7, 8	$T_{OA} > 24^{\circ}\text{C}$	Outdoor air temperature exceeds 24°C
	5a, 6a	$T_{OA} > 21^{\circ}\text{C}$	Outdoor air temperature exceeds 21°C
	1a, 2a, 3a, 4a,	$T_{OA} > 18^{\circ}\text{C}$	Outdoor air temperature exceeds 18°C
Differential dry-bulb temperature	1b, 2b, 3b, 3c, 4b, 4c, 5a, 5b, 5c, 6a, 6b, 7, 8	$T_{OA} > T_{RA}$	Outdoor air temperature exceeds return air temperature
Fixed enthalpy with fixed dry-bulb temperature	2a, 3a, 4a, 5a, 6a All	$h_{OA} > 47$ kJ/kg^a or $T_{OA} > 24^{\circ}\text{C}$	Outdoor air enthalpy exceeds 47 kJ/kg ^a or Outdoor air temperature exceeds 24°C
Electronic enthalpy	AH	$(T_{OA}, RH_{OA}) > A$	Outdoor air temperature/RH exceeds the "A" setpoint curve ^b
Differential enthalpy with fixed dry-bulb temperature	All	$h_{OA} > h_{RA}$ or $T_{OA} > 24^{\circ}\text{C}$	Outdoor air enthalpy exceeds return air enthalpy or Outdoor air temperature exceeds 24°C
Dew point and dry bulb temperatures	AH	$DP_{out} > 13^{\circ}\text{C}$ or $T_{out} > 24^{\circ}\text{C}$	Outdoor air dry bulb exceeds 24°C or outside dew point exceeds 13°C (0.009kg/kg)

^a At altitudes substantially different than sea level, the Fixed Enthalpy limit shall be set to the enthalpy value at 24°C and 50% relative humidity. As an example, at approximately 1830 m elevation the fixed enthalpy limit is approximately 53.5 kJ/kg.

^b Setpoint "A" corresponds to a curve on the psychrometric chart that goes through a point at approximately 24°C and 40% relative humidity and is nearly parallel to dry bulb lines at low humidity levels and nearly parallel to enthalpy lines at high humidity levels.

^b Devices with selectable (rather than adjustable) setpoints shall be capable of being set to within 1.1°C and 3.4 kJ/kg of the setpoint listed.

Make the following modifications to these sections:

6.5.1.1.3 High-Limit Shutoff. All air economizers shall be capable of automatically reducing *outdoor air* intake to the design minimum *outdoor air* quantity when *outdoor air* intake will no longer reduce cooling energy usage. High-limit shutoff control types and associated setpoints for specific climate zones shall be chosen from Table 6.5.1.1.3A. Control types not listed are prohibited in all climate zones. High-limit shutoff control settings for these control types shall be those listed in Table 6.5.1.1.3B.

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...

6.5.1.1.6 Sensor Accuracy. Outdoor air, return air, mixed air, and supply air sensors shall be calibrated within the following accuracies.

- a. Dry-bulb and wet-bulb temperatures shall be accurate to $\pm 2^{\circ}\text{F}$ (1.1°C) over the range of 40°F to 80°F (4.4°C to 27°C).
- b. Enthalpy and the value of a differential enthalpy sensor shall be accurate to ± 3 Btu/lb over the range of 20 to 36 Btu/lb (35 to 63 kJ/kg).
- c. Relative humidity (RH) shall be accurate to ± 5 percent over the range of 20 to 80 percent RH.

...

Table 11.3.2D Economizer High-Limit Shutoff

Economizer Type	High-Limit Shutoff
Air	Table 6.5.1.1.3 B
Water (integrated)	When its operation will no longer reduce HVAC system energy
Water (nonintegrated)	When its operation can no longer provide the cooling load



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FOREWORD

At the January 2013 Dallas meeting the SSPC 90.1 approved to send out for public reviews Addenda “bm” “co” and “cr” as 2nd PR-ISCs and a new Addendum “dl” for publication/public review (PPR)

The following explains the chronological changes embodied in these addenda out for public review.

- **BM** - *The 1st PR draft of Addendum “bm” makes revisions to Appendix G that includes adding Table G3.7 with values to use in the LPD calculation based on the Space-by-Space Method. The 2nd PR-ISC for Addendum “bm” makes further revisions to Table G3.7 and adds an additional Table G3.8 with values to use in the LPD calculation based on the Building Area Method.*
- **CO** - *The 2nd PR-ISC draft of Addendum “co” makes further revisions to values in Table 9.5.1 to use in the LPD calculation based on the Building Area Method.*
- **CR** - *The 2nd PR-ISC draft of Addendum “cr” makes further revisions to Table 9.6.1 by replacing the term “Assisted Living Facility” with “Facility for the Visually Impaired” for the LPD calculations using the Space-by-Space Method.*
- **DL** - *The 1st PR of Addendum “dl” makes further revisions to values in Table 9.5.1 to use in the LPD calculation based on the Building Area Method.*

While these addenda are out for public review these changes reflected by Addenda “co”, “cr” and “dl” are not reflected in the 2nd PR-ISC of Addendum “bm”, so this new addendum has been created to address those changes

[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 dx to 90.1-2010

Modify the Standard as follows

Revise Tables G3.7 and G3.8 of the Standard as follows (I-P units)

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TABLE G3.7 - Lighting Power Density Allowances Using the Space-by-Space Method

Common Space Types ¹	LPD (watts/sq.ft)		Building Type Specific Space Types ¹	LPD (watts/sq.ft)
.....	-	-	Facility for the Visually Impaired Assisted Living Facility	-
Corridor	-	-		-
... in a Facility for the Visually Impaired Assisted Living Facility (and used primarily by residents)	1.15	-		
.....				
Dining Area				
... in a Facility for the Visually Impaired Assisted Living Facility (and used primarily by residents)	3.32	-		
.....				
Guest Room	0.59 1.14	-		
.....	-	-		
Lobby				
... in a Facility for the Visually Impaired Assisted Living Facility (and used primarily by residents)	2.26	-		
.....	-	-		-
Restroom				
... in a Facility for the Visually Impaired Assisted Living Facility (and used primarily by residents)	1.52	-		-

Table G.3.8 Lighting Power Densities Using the Building area Method

Building Area Type	LPD (W/ft ²)
.....	
Hotel/Motel	0.73 1.09
.....	
Manufacturing facility	1.83 1.17
<u>Motel</u>	<u>0.70</u>

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TABLE G3.7 - Lighting Power Density Allowances Using the Space-by-Space Method

Common Space Types ¹	LPD (watts/sq.m)		Building Type Specific Space Types ¹	LPD (watts/sq.m)
.....	-	-	Facility for the Visually Impaired Assisted Living Facility	-
Corridor	-	-	-	-
... in a Facility for the Visually Impaired Assisted Living Facility (and used primarily by residents)	12.41	-		
...				
Dining Area				
... in a Facility for the Visually Impaired Assisted Living Facility (and used primarily by residents)	35.74	-		
.....				
Guest Room	6.34 <u>12.26</u>	-		
.....	-	-		
Lobby				
... in a Facility for the Visually Impaired Assisted Living Facility (and used primarily by residents)	24.27	-		
.....		-		-
Restroom				
... in a Facility for the Visually Impaired Assisted Living Facility (and used primarily by residents)	16.32	-		-

Table G.3.8 Lighting Power Densities Using the Building area Method

Building Area Type	LPD (W/m ²)
.....	
Hotel/Motel	3.01 <u>4.52</u>
.....	
Manufacturing facility	6.02 <u>12.59</u>
Motel	2.99



Note; Changes made to the 2008 version requirements are highlighted in **YELLOW** on pages: 28, 37, 46 and 51.

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Security Assurance Standards

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6.8 Security Failure Risk Management Objectives

Class I The ability to detect, analyze and prevent the re-occurrence of all breaches of security.

Class II The ability to detect, analyze and prevent the re-occurrence of breaches of security that result in serious consequences.

Class III Awareness of the need to prevent re-occurrence of serious security breaches and some ability to detect, analyze and act to prevent future breaches in a systematic manner.

6.8.1 Security Failure Risk Management Certification Criteria

Ref. No.	Certification Criteria M = Mandatory ; E = Enhancement (see Section 4.0 definitions Appendix A8)	Class I	Class II	Class III
		I	II	III
8-1	Security Breach Incident Log	M	M	M
8-2	A Written Breach Handling Procedure	M	M	M
8-3	A Designated Breach Manager	M	M	M
8-4	Failure Modes & Effects Analysis of Selected (Critical Only) Security systems	M	M	E
8-5	Plans & Preparations for Recovery & Mitigation of Effects	M	M	E
8-6	Deleted			
8-7	Links with Crime & Intelligence Agencies	M	E	E
8-8	Historical Breach Experience Reports	M	M	M
8-9	A Critical Security Area Monitoring System	M	M	E
8-10	Security Breach Informing System (Ears & Eyes)	M	M	M
8-11	A Working Relationship with Law Enforcement	M	M	M
8-12	A Comprehensive Failure Modes & Effects Analysis	E	E	E
8-13	Links with Interpol	E	E	E
8-14	Automated Material Track & Trace system	E	E	E
8-15	A Personnel Track & Trace system	M	E	E
8-16	A Document Track & Trace system	E	E	E

be considered to be unethical. For this reason any business organization intending to use false data techniques, to thwart fraud, is advised to inform Law Enforcement to establish both efficacy and legality. (back to [6.2.1](#))

2-16 Remote Listening System Evaluation; A remote listening system is a highly directional microphone (or video camera for lip reading) which can be used at long range to listen to conversations and meetings carried out inside secure premises The intent of this requirement is to evaluate the potential for use of these techniques by unauthorized persons. It is not the intent that these techniques be used by a bona fide organization to eavesdrop on suspected fraudsters. (back to [6.2.1](#))

2-17 Formal IT Security Risk Manager – A person with the appropriate technical (IT) skills and who has formal responsibility for IT security risk management issues and approaches for the business. (back to [6.2.1](#))

2-18 A Taking Work Home Policy; A written specification of the terms and conditions under which personnel are permitted to remove either hard copy or computer files so that work can continue at/from home. (back to [6.2.1](#))

2-19 Secure File Transfer Track & Trace; This is a computer software sub system which provides a time history record of all users of secure data files and identifies the destination of all file duplication operations. (back to [6.2.1](#))

2-20 Computer Access Control using Strong Passwords or other Strong Authentication Methods; Strong Passwords means the use of a difficult to guess combination of letters and/or numbers to gain access to a secure data file. Strong passwords should also be no less than 7 characters in length , be changed at least every 90 days, and not be recycled. Other strong authentication methods may include biometrics, tokens, or digital certificates. (back to [6.2.1](#))

2-21 Secure File Access Control; Means that access to read, write, create or delete files is controlled based on the identity, role, or group of a user. This function will always be performed on those files deemed sensitive, such as confidential information or system files or directories. (back to [6.2.1](#))

2-22 Secure External Data Transfer or Transmission; Means the use of strong data encryption such as 3DES, AES, or other well known algorithms to encode sensitive, security-related information transferred or transmitted electronically or in physical media format to individuals or organizations who are external to the jurisdiction of the organizations IT security group. Such transmission includes the use of eMail, eMail file attachments and all forms of physical media such as optical discs, magnetic discs, flash memory etc. Recognizing that implementation of secure transfer or transmission requires cooperation of both sender and receiver and that some customer receivers may not wish to cooperate, the mandatory requirement shall mean that a significant effort shall be made by the sending organization to implement secure external transfer or transmission and waived only when a written expression of unwillingness to cooperate is provided to the sender by the customer receiving organization. (back to [6.2.1](#))

2-23 Destruction of Media; The use of any process that converts media (i.e. documents, disks, et al) into a form that makes reconstruction extremely difficult. (back to [6.2.1](#))

5-17 Motion Detection; Devices used in secure areas to detect the movement of persons in the area. When armed the devices should provide an alarm to security or monitoring personnel. (back to [6.5.1](#))

5-18 Fire and Smoke Detection; Smoke and fire detection devices should be installed throughout the facility and monitored on a continual basis. (back to [6.5.1](#))

5-19 Internal Emergency Alarm System; This system falls within the organization's secure premises. The system enables a person who is under duress inside the premises to add, inconspicuously, a special code which raises an alarm. The special codes can be added to both physical access terminals and computer file access protocols. Duress alarm buttons are typically provided at common entrance areas, secure areas, vaults, and security control rooms. They are typically monitored both internally and externally. The activation of a duress button should have a required response time from the monitoring service. Any use of a duress button should always be recorded. (back to [6.5.1](#))

5-20 Restricted Access Areas; Areas located within a facility that restrict the entrance of unauthorized personnel. (back to [6.5.1](#))

5-21 Controlled Shipping and Receiving; Dock areas must include devices and barriers that restrict the movement of transportation personnel to designated areas. These devices and barriers shall provide for a physical separation and visual obstruction of secure areas from dock areas. The physical separation shall prevent transportation personnel from entering secure areas of a facility without approved access permission. Controlled shipping and receiving also requires that a method of control over transportation shipping and receiving vehicles be implemented to prevent unauthorized departure. (back to [6.5.1](#))

5-22 Guard Controlled Access; At points of common entry a trained uniformed guard shall control the access of all personnel entering and exiting the facility. (back to [6.5.1](#))

5-23 Security Control Room; If a security control room (SCR) is used it must be an enclosed and restricted area containing monitoring and control devices for the facilities security. This room may also accommodate security personnel. Access to the security control room must be locked at all times with limited access and records of access/egress. Entry should be on a "need to be there" basis and approval for access must be reviewed by Security Management. The intrusion resistance, surveillance and access control of this room of this room must comply with NASPO 5-13, 5-15 and 5-20 respectively. (back to [6.5.1](#))

5-24 Dual Control Access; In designated secure areas, entrance can only be made with a minimum of two people; typically a minimum of two people must be in the area any time the area is occupied. (back to [6.5.1](#))

5-25 Dress Codes for Restricted Areas; A dress code that reduces the possibility of secure products being easily concealed and stolen. These usually encompass the use of pocket-less garments and a restrictions of items that can be taken into and out of a secure area. (back to [6.5.1](#))

5-26 External Emergency Alarm System; This system is used outside of the organization's secure premises. The system enables a person under duress away from

A8 – Security Failure (Breach) Criteria Definitions

8-1 Security Breach Incident Log; This is a written record of all breaches of security. The record must give time and date, a brief description of the breach and the area of risk that is most appropriate. An analysis of cause and effect may also be included. (back to [6.8.1](#))

8-2 A Written Breach Handling Procedure; A procedure that details what happens when there is a breach of security. (back to [6.8.1](#))

8-3 A Designated Breach Manager; This is the person made responsible for causing the organization to follow the Breach Handling Procedure and successful completion of necessary corrective actions. (back to [6.8.1](#))

8-4 Failure Modes & Effects Analysis of Selected (Critical Only) Security systems; This is an analysis limited to the most critical security systems whose failure is judged, in advance, to have serious consequences. Failure Modes & Effects Analysis examines what happens when systems set up to control security risks, fail. This type of analysis creates failure scenarios and then determines their effects and consequences. This type of analysis is used to set control priorities and to determine ways to mitigate fraudulent acts if and when they occur. (back to [6.8.1](#))

8-5 Plans & Preparations for Recovery & Mitigation of Effects; These plans define how the organization will react to fraudulent acts, recover from them and mitigate their effects by preserving the intrinsic security value of the NASPO Members security products. (back to [6.8.1](#))

8-6 Company & Employee Legal Liability Awareness; Deleted.

8-7 Links with Crime & Intelligence Agencies; Are contacts who agree to provide early warning of possible fraudulent acts or trends related to the security products of the company. (back to [6.8.1](#))

8-8 Historical Breach Experience Reports; These reports provide a precise account of each breach of security, how and why it happened, the after effects and corrective actions taken. (back to [6.8.1](#))

8-9 A Critical Security Area Video Monitoring system; This is a CCTV system which enables security guards to clearly view and make time history records of activities in high security areas. (back to [6.8.1](#)) (back to Table of Contents)

8-10 Security Breach Informing System (Ears & Eyes); This is a procedure to encourage organization personnel to always be on the lookout for and report significant breaches of security. Those reported must be logged, analyzed and acted upon to prevent a reoccurrence. (back to [6.8.1](#))

8-11 A Working Relationship with Law Enforcement; The existence of a working relationship with local law enforcement to gain agreement to work together to detect, control, and respond in a timely manner to fraudulent acts related to the security products of the company. (back to [6.8.1](#))

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2 Normative References

UL 1821 *Thermoplastic Sprinkler Pipe and Fittings for Fire Protection Service*¹

Table 34 – sprinkler pipe and fitting test frequency

Test	pipe	fitting
dimension ^{1,2}	x	x
crush resistance	annually	
stress corrosion cracking of SS parts		annually
flexural test	annually	
impact resistance test	annually	
kinking test	annually	
assembly test	annually	annually
hydrostatic pressure test	daily	daily
10 day moist ammonia air stress cracking		annually
long term hydrostatic - 1000 hour	annually	annually
marking permanency	annually	annually
product standard	UL 1821	UL 1821
¹ Pipe shall meet the applicable QC requirement of NSF/ANSI 14 in addition of continuous monitoring of the wall thickness per section 31 of UL 1821 ² Fitting shall meet the applicable QC requirements of NSF/ANSI 14		

¹ Underwriters Laboratories, 333 Pfingsten Rd., Northbrook, IL 60062 <www.ul.com>.

BSR/UL 44, Standard for Thermoset-Insulated Wires and Cables

1. Proposed New Edition of UL 44

3.2 Reference publications

3.2.1 This Standard refers to the following publications and where reference is made to ANCE, CSA, or UL Standards, such reference shall be considered to refer to the latest edition and all amendments published to that edition. Where such reference is made to other publications, it shall be to the edition listed below.

ANCE Standards

NOM-001-SEDE

Standard for Electrical Installations

NMX-E-034-SCFI

Plastics Industry - Carbon Black Contents on Polyethylene Materials - Test Method

NMX-J-008-ANCE

Tinned Soft or Annealed Copper Wire for Electrical Purposes - Specifications

NMX-J-012-ANCE

Wires and Cables - Concentric Lay Stranded Copper Conductors for Electrical Purposes - Specifications

NMX-J-013-ANCE

Wires and Cables - Rope Lay Stranded Copper Conductors Having Concentric Stranded Members for Electrical Purposes - Specifications

NMX-J-014-ANCE

Wires and Cables - Rope Lay Stranded Copper Conductors Having Bunch Stranded Members for Electrical Purposes - Specifications

NMX-J-032-ANCE

Wires and Cables - Concentric Lay Stranded Aluminum Cable for Electrical Purposes - Specifications

NMX-J-036-ANCE

Soft or Annealed Copper Wire for Electrical Purposes - Specifications

NMX-J-040-ANCE

Wires and Cables - Determination of the Moisture Absorption in Insulations of Electrical Conductors - Test Method

NMX-J-066-ANCE

Determination of Diameters of Electrical Conductors - Test Method

NMX-J-093-ANCE

Wires and Cables - Determination of the Resistance to Fire Propagation on Electrical Conductors - Test Method

NMX-J-177-ANCE

Wires and Cables - Determination of Thickness in Semiconductive Shielding, Insulations, and Jackets of Electrical Conductors - Test Method

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NMX-J-178-ANCE

Wires and Cables - Ultimate Strength and Elongation of Insulation, Semiconducting Shields and Jackets of Electrical Conductors - Test Method

NMX-J-186-ANCE

Wires and Cables - Accelerated Aging in Forced Convection Oven of Semiconducting Shields, Insulations and Jackets of Electrical Conductors - Test Method

NMX-J-190-ANCE

Wires and Cables - Thermal Shock Resistance of PVC Insulations and Protective Coverings of Electrical Conductors - Test Method

NMX-J-191-ANCE

Wires and Cables - Heat Distortion of Insulations and Protective Coverings of Electrical Conductors - Test Method

NMX-J-192-ANCE

Electrical Products - Wires and Cables - Flame Test on Electrical Wires - Test Method

NMX-J-193-ANCE

Wires and Cables - Cold Bend of Insulation and Non-Metallic Protective Jackets Used on Insulated Wire and Cable - Test Method

NMX-J-194-ANCE

Wires and Cables - Oil Immersion Aging for Insulations and Jackets of Electrical Conductors - Test Method

NMX-J-212-ANCE

Wires and Cables - Electrical Resistance, Resistivity and Conductivity - Test Method

NMX-J-293-ANCE

Wires and Cables - Alternative Current and Direct Current Dielectric Voltage Withstand - Test Method

NMX-J-294-ANCE

Wires and Cables - Insulation Resistance - Test Method

NMX-J-312-ANCE

Wires and Cables - Tensile Strength and Elongation at Break of Electrical Conductors - Test Method

NMX-J-432-ANCE

Wires and Cables - Determination of Hot Elongation and Permanent Deformation (Hot Creep), to Ethylene Propylene Rubber and Cross-Linked Polyethylene Insulations - Test Method

NMX-J-472-ANCE

Electrical Products - Wires and Cables - Determination of the Amount of Halogen Acid Gas Evolved During the Controlled Combustion of Polymeric Materials Taken from Electrical Cables - Test Method

NMX-J-473-ANCE

Wires and Cables - Spark Test - Test Method

NMX-J-474-ANCE

Electrical Products - Wires and Cables - Determination of Specific Optical Density of Smoke Generated by Electrical Wires and Cables - Test Method

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NMX-J-498-ANCE
Wires and Cables - Vertical Tray Flame

NMX-J-553-ANCE
Wires and Cables - Weather Resistance of Insulation or Jacket of Electrical Conductors - Test Method

NMX-J-556-ANCE
Wire and Cable Test Methods

CSA Standards

C22.1-12
Canadian Electrical Code, Part I

CAN/CSA C22.2 No. 2556-07
Wire and Cable Test Methods

UL Standards

UL 2556
Wire and Cable Test Methods

ASTM (American Society for Testing and Materials)

B3-01(2007)
Soft or Annealed Copper Wire

B8-11
Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft

B33-10
Tinned Soft or Annealed Copper Wire for Electrical Purposes

B172-10
Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Members, for Electrical Conductors

B173-10
Rope-Lay-Stranded Copper Conductors Having Concentric-Stranded Members, for Electrical Conductors

B231/B231M-11
Standard Specification for Concentric-Lay-Stranded Aluminum 1350 Conductors

B298-07
Standard Specification for Silver-Coated Soft or Annealed Copper Wire

B355-11
Standard Specification for Nickel-Coated Soft or Annealed Copper Wire

B835-04(2009)
Standard Specification for Compact Round Stranded Copper Conductors Using Single Input Wire Construction

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B836-00(2011)

Standard Specification for Compact Round Stranded Aluminum Conductors Using Single Input Wire Construction

D2663-08

Standard Test Methods for Carbon Black - Dispersion in Rubber

IEC (International Electrotechnical Commission)

60228 (2004-11)

Conductors of insulated cables

National Research Council Canada

National Building Code of Canada, 2010

NFPA (National Fire Protection Association)

NFPA 70-2011

National Electrical Code

5.15 Weather (sunlight) resistance (optional)

5.15.1 To be marked SR, unfilled XL material shall contain a minimum of 2.0 percent carbon black content, determined in accordance with the test, Carbon black content, in UL 2556, CSA C22.2 No. 2556, or NMX-E-034-SCFI, and having a particle size of 95 nm or less. materials shall retain 80 percent of their initial tensile strength and elongation values after being subjected to 720 h xenon or carbon arc exposure in accordance with the test, Physical properties (ultimate elongation and tensile strength) - Weather (sunlight) resistance, in UL 2556, CSA C22.2 No. 2556, or NMX-J-553-ANCE.

Note: *Particle size values can be obtained from the compound supplier.*

5.15.2 To be marked SR, materials other than unfilled XL shall retain 80 percent of their initial tensile strength and elongation values after being subjected to 720 h xenon or carbon arc exposure in accordance with the test, Physical properties (ultimate elongation and tensile strength) - Weather (sunlight) resistance, in UL 2556, CSA C22.2 No. 2556, or NMX-J-553-ANCE. XL material containing a minimum of 2.0 percent carbon black measured to a depth of at least 0.76 mm (0.030 in) need not be tested in accordance with 5.15.1. The carbon black content shall be determined in accordance with the test, Carbon black content, in UL 2556, CSA C22.2 No. 2556, or NMX-E-034-SCFI and shall have a particle size of 95 nm or less. The carbon black shall be C or higher with an agglomerate size of 2 or less as measured in accordance with ASTM D2663, Test Method B - Agglomerate Method.

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BSR/UL 83, Standard for Thermoplastic-Insulated Wires and Cables

1. Proposed New Edition of UL 83

5.2 Conductor resistance

5.2.1 The direct-current resistance of the conductor shall not be greater than shown in Tables 14 - ~~22~~ 22A inclusive. For conductors for which the maximum resistance is not tabulated in Tables 14 - 22A, the maximum resistance for a given size of the solid or stranded construction shall be determined by multiplying the maximum resistance tabulated in the tables for uncoated copper of the same size and construction by the ratio of 100 percent IACS (International Annealed Copper Standard) to the percent conductivity as shown in the applicable conductor standard.

5.13 Weather resistance (optional)

To be marked SR, the insulation of a single wet-rated conductor having no outer jacket or covering, the outer jacket of a multiconductor cable, and the insulation and nylon covering of nylon-covered conductors of a completed single wire or a multiconductor cable shall retain at least 80 percent of their unconditioned tensile strength and elongation values, after conditioning ~~for 720 h~~ in a specified weather-resistance apparatus. The rate of separation shall be 0.85 mm/s (2 in/min) for the testing of the nylon covering.

~~In the United States and Mexico, the conditioning shall be 720 h.~~

~~In Canada, the conditioning shall be 1000 h.~~

Compliance shall be determined in accordance with the applicable clauses of the test, Physical Properties - Weather (sunlight) resistance, in UL 2556, CSA C22.2 No. 2556, or NMX-J-553-ANCE.

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BSR/UL 153, Standard for Safety for Portable Electric Luminaires

1. Revise extension cord types in wet locations in 193.2

193.2 The following instructions shall be separated in format from the other instructions and shall appear before any operating instructions. The phrases "Read All Instructions" and "SAVE THESE INSTRUCTIONS" shall appear and shall be the first and last items, respectively. The phrase "Read All Instructions" shall be preceded by the statement "WARNING: When using outdoor use portable luminaires, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury, including the following..." Equivalent wordings in equally definitive terminology are able to be used, except for the signal word. The instructions shall be legible and shall contrast with the background.

- a) Use only three-wire outdoor extension cords that have three-prong grounding plugs and grounding receptacles that accept the appliance's plug.
- b) Ground Fault Circuit Interrupter (GFCI) protection is to be provided on the circuit(s) or outlet(s) to be used for the wet location portable luminaire. Receptacles are available having built-in GFCI protection and are able to be used for this measure of safety.
- c) Use only with an extension cord for outdoor use, such as an extension cord of cord type ~~SW, SW-A, SEW, SEOW, SEOOW, SOW, SOW-A, STW, STW-A, STOW, STOOW, STOW-A, SJEW, SJEOW, SJEOW, SJW, SJW-A, SJOW, SJOOW, SJOW-A, SJWTW, SJWTW-A, or SJTOW, or SJTOOW~~ SEW, SEOW, SEOOW, SOW, SOW-A, STW, STW-A, STOW, STOOW, STOW-A, SJEW, SJEOW, SJEOW, SJW, SJW-A, SJOW, SJOOW, SJOW-A, SJWTW, SJWTW-A, or SJTOW, or SJTOOW ~~SEW-A.~~

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The following changes in requirements to the Standard for Safety for Centrifugal Stationary Pumps for Fire-Protection Service, UL 448, are being proposed:

For your convenience in review, proposed additions to existing requirements are shown underlined and proposed deletions are shown ~~lined-out~~.

1. Dimensional Requirements for Pump Flanges and Threaded Connections

PROPOSAL

6.9 Flange dimensions and bolt layouts used in pipe connections shall comply with the requirements of one of the following standards: ~~in the Standard for Cast Iron Pipe Flanges and Flanged Fittings, ANSI/ASME B16.1.~~

- a) Standard for Cast Iron Pipe Flanges and Flanged Fittings, ANSI/ASME B16.1;
- b) Standard for Ductile Iron Pipe Flanges and Flanged Fittings, ANSI/ASME B16.42;
or
- c) Standard for Pipe Flanges and Flanged Fittings: NPS 1/2 through 24, ANSI/ASME B16.5, when steel is used

Exception: A pump intended for use in installations where the connection piping has national pipe flange dimensions that are different from these standards shall be permitted to be constructed with flanges complying with the national pipe flange standard compatible with connection piping.

6.10 A threaded opening used for pipe connection shall comply with the requirements in the Standard for Pipe Threads, General Purpose, ANSI/ASME B1.20.1.

Exception: A pump intended for use in installations where the connected piping has national pipe threads that are different from ANSI/ASME B1.20.1 shall be permitted to be constructed with threads complying with the national pipe thread standard compatible with the connected piping.

2. Clarification and Updating of Requirements Related to Pump Construction, Performance Testing and Marking

PROPOSAL

5.2.1 PRESSURE, MAXIMUM NET - The maximum net pressure developed by the pump at the rated speed which typically occurs at or near shutoff pressure.

5.4 PRESSURE, NET (TOTAL HEAD):

- a) For a split-case, end-suction, or in-line pump, or a vertical-turbine pump in a suction vessel, the algebraic difference in psi (kPa) between pressures measured at the discharge flange and at the suction flange, corrected to the pump centerline and corrected for differences in velocity head at the points of gauge attachment.
- b) For a vertical-turbine pump in a sump pump or well, the pressure measured by a pressure gauge attached just beyond the discharge head, corrected for the velocity head at the point of gauge attachment and for the vertical distance from the pumping water level to the center of the gauge.

6.6 The maximum stress on any bolt of a pressure-holding casting shall not exceed one-fourth the elastic limit of the material as computed by using the stress area. The stress area is defined by the equation:

$$A_s = 0.7854 \left(D - \frac{0.9743}{n} \right)^2$$

in which:

A_s is the stress area in square inches ($m^2 \times 1550$);

D is the nominal diameter of bolt in inches ($mm \times 0.04$); and

n is the number of threads per inch (25.4 mm).

The load on the bolts is to be computed on the basis of the water pressure equivalent to the maximum working pressure effective over the area out to the centerline of the bolts.

20.1 Water-lubricated line-shaft bearings shall be of rubber or neoprene material housed in a spider and spaced no more than 10 feet (3.05 m) apart. The spider legs shall be streamlined to offer minimal resistance to the flow of water through the supporting column.

24.1 A pump shall have a rated capacity as specified in 6.2 and shall have rated net pressures of 40 psi (276 kPa) or higher. More than one capacity-pressure rating may be developed for any pump. For each rated capacity, a pump shall develop not less than the rated total head as defined in 5.4.

24.4 For the tests described in 24.5 - 24.9, the applicable Level 1UA test tolerances as specified in the American National Standard for Rotodynamic Pumps for Hydraulic Performance Acceptance Tests, ANSI/HI 14.6-2011 Hydraulic Institute Standards for Centrifugal, Rotary and Reciprocating Pumps are to be utilized. The operation test shall be permitted to be conducted at a speed within ± 10 percent of the rated speed, and the performance curves for the exact rated speed determined by means of affinity relationships.

24.6 A pump intended for a range of rated net pressures is to be tested with the minimum and maximum diameter impellers to demonstrate the ability of the pump to produce the minimum and maximum net pressures, and any pressure within the specified range for the pump model or type designation of different diameters to produce the minimum and maximum net pressures.

24.9 A split-case, end-suction, or in-line pump, or a vertical-turbine pump provided with a suction vessel, is to be tested at rated capacity and 150 percent of rated capacity with a water vacuum of 15 feet (4.57 m) at the pump suction flange (manometer location corrected to datum) at sea level and reduced by 0.001 feet (0.3 mm) for each foot (0.3 m) of elevation above sea level net positive suction head (NPSH) at the pump suction flange of 19 feet absolute (5.79 m) [minus 15 feet (minus 4.57 m)] at sea level, as determined by a manometer installed at the inlet flange. During the test, the manometer is not to read less than 15 feet (4.57 m) of water vacuum when corrected to sea level and water temperature not exceeding 80°F (26.7°C).

28.3 The nameplate shall include the following information:

- a) Manufacturer's or private labeler's name or identifying symbol;
- b) Capacity of pump, ___ gallons per minute at ___ pounds per square inch (rated net pressure), or ___ liters per minute at ___ kPa (rated net pressure);
- c) Rated speed;
- d) Model or type designation;
- e) Serial number;
- f) Shutoff Maximum net pressure or the maximum net pressure if this pressure is higher than shutoff pressure developed (psi or kPa);
- g) Net pressure at 150 percent rated capacity (psi or kPa);
- h) Number of stages;

- i) Impeller diameter;
- j) Maximum brake-horsepower required at rated speed at any capacity condition;
- k) Maximum positive suction pressure (psi or kPa) for pumps intended to be connected to suction piping; and
- l) For a vertical turbine pump intended for installation in a sump or well, the minimum submergence (inches or centimeters).

3. New Nameplate Fastener Material Requirements

PROPOSAL

28.1 Each pump shall be provided with a nameplate of corrosion-resistant metal that is securely attached to the pump and visible after installation. Fasteners used to attach the nameplate to the pump shall be constructed of a corrosion resistant material. Attachment of the nameplate to a steel base is not acceptable.

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BSR/UL 1042, Standard Electric Baseboard Heating Equipment

1. Correction to Paragraph 22.7

22.7 The disconnecting means of a fixed electric baseboard heater shall have an ampere rating not less than 125 percent of the total load of the motors and the heaters and shall simultaneously disconnect the heater, motor controller(s), and supplementary overcurrent protective devices from all ungrounded conductors. ~~The provision for locking or adding a lock to the disconnecting means shall be installed on or at the switch or circuit breaker used as the disconnecting means and shall remain in place with or without the lock installed.~~

2. Alternative Temperature Test Material

32.1.5 The felt mentioned in 32.1.14 and 40.2 is to be 100-percent standard-weight, all-cattle-hair, punched felt with center reinforcement consisting of burlap having a mass of 5 ounces per square yard (170 g/m^2). Felt 1 in (25 mm) thick has a mass of 105 ± 15 ounces per square yard ($3.56 \pm 0.51 \text{ kg/m}^2$). Felt 3/4 in (19 mm) thick has a mass of 79 ± 9 ounces per square yard ($2.68 \pm 0.31 \text{ kg/m}^2$).

Exception: Exception: SAE J314, Grade F-11, minimum 1 inch (25 mm) thick wool felt may be used as a substitute for the all-cattle-hair mat.

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BSR/UL 2021, Standard for Safety for Fixed and Location-Dedicated Electric Room Heaters

1. Correction to Paragraph 28.20

28.20 The disconnecting means of a fixed electric room heater shall have an ampere rating not less than 125 percent of the total load of the motors and the heaters and shall simultaneously disconnect the heater, motor controller(s), and supplementary overcurrent protective devices from all ungrounded conductors. ~~The provision for locking or adding a lock to the disconnecting means shall be installed on or at the switch or circuit breaker used as the disconnecting means and shall remain in place with or without the lock installed.~~

2. Miscellaneous Revisions to Sections Covering Warning Markings, the Alarm Endurance Test, Maximum Acceptable Temperature Rises, Rain Test Requirements, and Extension Cord Requirements

7.26 During the examination of a heater in connection with the requirements in 7.17- 7.25, a part of the outer enclosure that may be removed without the use of tools by the user of the heater (to permit the attachment of accessories, to allow access to means for making operating adjustments, or for other reasons) is to be disregarded - that is, it will not be assumed that the part in question affords protection against the risk of electric shock. A warning marking such as that specified in ~~59.9~~ 59.7 is not considered to adequately protect against this risk of electric shock.

7.28 During the examination of a heater in connection with the requirements in 7.17- 7.25, a part of the outer enclosure that is removed with the use of tools by the user of the heater to permit resetting of the manual reset temperature limiting control is to be disregarded - that is, it will not be assumed that the part in question affords protection against the risk of electric shock. A warning marking such as that specified in ~~59.9~~ 59.7 is not considered to adequately protect against this risk of electric shock.

Exception: A heater marked in accordance with 59.7 and that complies with ~~7.23~~ 7.29 need not comply with this requirement.

25.3 A visual alarm shall consist of a light that is red and of a different color than the lamp used in the "power on" pilot light (see 13.6.1) or of a flashing indicator light that has an "on" time not less than one third of the "off" time and that cycles on and off at least 15 times a minute. The indicator light shall be constructed and located as specified in 13.6.1 and it shall comply with the visibility requirements in 13.6.2. The lamp used in the indicator light shall have a minimum rated life of 20,000 continuous hours at rated voltage ~~and~~ or it shall withstand the test specified in the Alarm Device Endurance Test, Section 40.

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Table 36.1

Maximum acceptable temperature rises

Materials and component parts		Degrees	
		C	F
1.	Any point within a terminal box or wiring compartment of a permanently connected heating appliance in which field-installed conductors are to be connected (including such conductors themselves) unless the appliance is marked in accordance with 59.13	35	63
2.	Any point on a surface adjacent to a fixed heater (including the surface on which the heater is mounted) specified points on test surfaces and enclosures at designated clearances from the heater, a metal surface of a heater at the point of contact with the test surface, and the exterior surface of a recessed heater that may come into contact with combustible material within the test enclosure	65	117
3.	Fuses ^a	65	117
4.	Fiber used as electrical insulation or as cord bushings	65	117
5.	Wood or other combustible material which is part of the heater	65	117
6.	Cotton or rayon braid of a flexible cord	65 ^b	117 ^b
7.	Class 105 insulated relay or solenoid winding	65 ^c	117 ^c
8.	Class A insulation system on coil windings of an a-c motor having a frame diameter (see note d) of more than 7 inches (178 mm) and of a d-c or universal motor ^d :		
	a. In an open motor:		
	Thermocouple method	65	117
	Resistance method	75	135
	b. In a totally enclosed motor:		
	Thermocouple method	70	126
	Resistance method	80	144
9.	Class B A insulation systems on coil windings or a-c motor (not including a universal motor) having a frame diameter (see note d) of 7 inches (178 mm) or less and on a vibrator coil - thermocouple or resistance method ^c :		
	a. In open motor and on a vibrator coil	75	135
	b. In a totally enclosed motor	80	144
10.	Class 130 insulation systems except as indicated in items 11 and 12		
	Thermocouple method ^c	85	153
	Resistance method	105	189
11.	Class A B insulation system on coil windings of an a-c motor having a frame diameter (see note d) of more than 7 inches (178 mm) and of a		

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	d-c or universal motor ^e		
	a. In an open motor:		
	Thermocouple method ^b	85	153
	Resistance method	95	171
	b. In totally enclosed motor:		
	Thermocouple method	90	162
	Resistance method	100	180
12.	Class B insulation system on coil windings of an a-c motor (not including a universal motor) having a frame diameter (see note d) of 7 inches or less and on vibrator coils - thermocouple or resistance method ^e :		
	a. In open motors and on vibrator coils	95	171
	b. In totally enclosed motors	100	180
13.	Phenolic composition used as electrical insulation or where degradation would result in a risk of fire or electric shock condition ^f	125	225
14.	Insulated wire or cord	25°C (45°F) less than its temperature rating ^g	
15.	Sealing compound ^h		
16.	Copper conductor, bare or insulated, without tinning, nickel coating, or silver plating, except as noted in item 17	175	315
17.	Termination of copper conductor in a pressure terminal connector:		
	a. Terminal and/or conductor unplated	125	225
	b. Terminal and conductor tinned, nickel-coated, or silver-plated	175	315
18.	Register temperature of floor insert heater:		
	a. Metal grill ^f	44	80
	b. Nonmetallic grill ^f	50	90
19.	Points of handles, switches, and control knobs and buttons likely to be contacted by the user during normal operation, and the surfaces likely to be contacted by hands or fingers in grasping handles, switches, and control knobs and buttons ⁱ :		
	a. Metal	35	63
	b. Nonmetallic ⁱ	60	108
20.	Power diode case (body)	k	k

^a Includes both casing and ferrule. However, a temperature not more than 20°C (36°F) higher than the values indicated in the Table is acceptable on the casing (not the ferrule) of a Class G, J, or T fuse.

^b Inside a heater, the braid of a heater cord may be subjected to a greater rise if the inorganic fiber insulation is held in place by other acceptable means.

^c A maximum rise of 85°C (153°F) is acceptable by the resistance method.

^d This is the diameter, measured in the plane of the laminations, of the circle circumscribing the stator frame, excluding lugs, fins, boxes, and the like, used solely for motor mounting, cooling, assembly, or connections.

^e See 36.6 and 36.7.

^f The limitation on phenolic composition does not apply to a compound which has been investigated and found to have heat-resistant properties.

^g Inside a heater, the temperature rise on a wire or cord may be greater than the specified maximum rise provided that the insulation on each individual conductor is protected by supplementary insulation (such as a braid, wrap, tape or close-fitting tubing) which is acceptable for the temperature and type of insulation involved.

^h Unless a thermosetting material, the maximum sealing-compound temperature, when corrected to a 25°C (77°F) ambient temperature is 15°C (27°F) less than the softening point of the compound as determined by the Standard Test Method for Softening Point by Ring-and-Ball Apparatus, ASTM E28-96.

ⁱ Surfaces likely to be contacted are considered to be those within 1-1/2 inches (38 mm) of the gripping surface of a knob or button, measured in the same plane as the surface on which the knob or button is mounted, except that the surface behind the knob or button is not considered likely to be contacted if:

- 1) The knob or button is at least 1 inch (25.4 mm) long, including the shaft extension, or
- 2) If a knob or a button less than 1 inch long is provided with a skirt or flange at the base of its gripping surface that is at least 1/4 inch (6.4 mm) wide.

The gripping surface for a carrying handle is considered to be 4 inches (102 mm) wide, and surfaces likely to be contacted are considered to be those within 1-1/2 inch, in any direction of the gripping surface of the handle. Points and surfaces guarded by a barrier that is at least 5/8 inch (15.9 mm) wide are not considered likely to be contacted provided the temperature rise of the barrier does not exceed the required values.

^j A knob, handle, or button made of nonmetallic material that is plated or clad with metal having a thickness of 0.005 inch (0.13 mm) or less and a metal knob, handle, or button having a plastic or vinyl covering of not less than 0.005 inch thickness is to be judged as a nonmetallic part.

^k This temperature rise on a power diode shall not exceed the difference between the ambient and the temperature rating specified for the diode by the diode manufacturer. If no temperature rating is specified for the power diode, the maximum acceptable temperature rise shall not exceed 65°C (117°F).

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~~48.6 The water to be used for the test is to have a resistivity of 300 ohm-centimeters.~~

60.7.1 At least the following information pertaining to the heater features and its use conditions shall be included on the external surface of the packaging of a movable heater. All information shall be grouped together and appear on one side of the packaging.

- a) Voltage and ampere or wattage rating.
- b) The specific location, if the intended location of the heater is specific (such as floor only, wall mounted only, wall insert, and the like).
- ~~c) Information pertaining to the use of an extension cord. See 60.3.1, Important Instructions, item 15.~~
- d) The type of cord and plug receptacle configuration (can be described or shown pictorially), if other than standard 120 volts/15 or 20 amperes configuration.
- e) Clearances to be maintained from combustibles, giving examples of combustibles. See 60.2.1, Important Instructions, item 2.

Exception: This information need not be provided if Exception Nos. 1, 2, or 3 to 59.27 apply.

- f) A statement specifying that the heater is not to be used in wet or moist locations (see 60.3.1, Important Instructions, item 7), unless the heater is identified as suitable for such use.

3. Alternative Temperature Test Material

36.16 The felt mentioned in this Standard to be 100 percent standard-weight, all-cattle-hair, punched felt with center reinforcement consisting of burlap having a mass of 5 ounces per square yard (.17 kg/m²). Felt 1 inch (25 mm) thick has a mass of 105 ±0.51 kg/m². Felt 3/4 inch (19 mm) thick has a mass of 79 ±9 ounces per square yard (2.68 ±0.31 kg/m²).

Exception: SAE J14, Grade F-11, minimum 1 inch (25 mm) thick wool felt may be used as a substitute for the all-cattle-hair mat.

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BSR/UL 2200, Standard for Safety For Stationary Engine Generator Assemblies

1. Proposed option to provide the marking regarding the requirements for a stationary engine generator assembly that is shipped with a partially installed or incomplete exhaust system in the instruction manual

42.3 When a unit is provided with a partially installed or incomplete exhaust system the information in 69.1.4(t) shall be provided.

~~68.2.21 Engine driven generator assemblies provided with incomplete exhaust systems shall be marked as follows: "Exhaust piping and chimneys shall be designed, constructed, and installed in accordance with the Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines, NFPA 37."~~

69.1.4 The information described in (a) - (s t), as applicable, shall be provided. The information contained in (c) - (s t) shall be either marked on the unit or provided in the instruction manual.

IMPORTANT SAFETY INSTRUCTIONS

a) **SAVE THESE INSTRUCTIONS** - This manual contains important instructions for Models _____ (blank space is to be filled in with appropriate model numbers) that should be followed during installation and maintenance of the generator and batteries.

Exception: When the instructions are exactly the same for all models, specific model numbers need not be specified.

b) In accordance with 16.1.8, when pressure terminal connectors or the fastening hardware are not provided on the unit as shipped, the instruction manual shall indicate which pressure terminal connector or component terminal assemblies are for use with the generator.

c) With reference to (b) the terminal assembly packages and the instruction manual shall include information identifying wire size and manufacturer's name, trademark, or other descriptive marking by which the organization responsible for the product is identified.

d) When a pressure terminal connector provided in the unit [or in a terminal assembly covered in 16.1.8(d)] for a field installed conductor requires the use of other than an ordinary tool for securing the conductor, identification of the tool and any required instructions for using the tool shall be included in the instruction manual.

e) A unit provided with a wire connector for field installed wiring as covered in Exception No. 2 to 16.1.15 shall be provided with instructions specifying that the connector provided is to be used in making the field connection.

f) A unit employing pressure terminal connectors for field wiring connections shall be provided with instructions specifying a range of values or a nominal value of tightening torque to be applied to the clamping screws of the terminal connectors. The minimum specified tightening torque shall not be less than 90 percent of the value specified in Tables 69.1 or 69.2 as applicable for the wire size determined by the requirement described in 16.1.4.

Exception: The torque value is not prohibited from being less than 90 percent when the connector is investigated in accordance with the lesser assigned torque value in either:

- 1) *The Standard for Wire Connectors, UL 486A-486B,*
 - 2) *The Standard for Equipment Wiring Terminals for Use with Aluminum and/or Copper Conductors, UL 486E.*
- g) The instruction manual for a generator having an internal battery supply shall indicate the nominal voltage rating of the battery supply.
- h) When a symbol is used for compliance with marking requirements specified in 68.2.3, 68.2.9, or 68.2.13, the instruction manual shall identify the symbol.
- i) The instruction manual for a unit that exceeds the temperature limits in the third item of Table 44.1 (see Exception to 44.3) shall specify that the unit is to be installed so that the risk of contact by people is minimized.
- j) In accordance with 44.9, the instruction manual for a generator having an ambient temperature rating higher than 25°C (77°F) shall indicate the maximum ambient temperature rating.
- k) The instruction manual for a unit having an integral battery compartment that is not provided with the batteries shall specify the group number and minimum cold cranking ampere rating of batteries that are used with the product.
- l) For a unit having a single equipment field-wiring terminal that is intended for connection of more than one conductor, the instruction manual shall include information identifying the number of conductors and range of conductor sizes.
- m) For a unit provided with field-wiring terminals or leads, the instruction manual shall include the information indicated in Row 1, 2, 3, or 4 of Table 69.3 or with equivalent wording, when it is:
- 1) Intended for use on a circuit rated 100 amperes or less, or
 - 2) Intended for field connection with 1 AWG (42.4 mm²) or smaller conductors.
- n) For a unit provided with field-wiring terminals or leads, the instruction manual shall include the information indicated in Row 3 or 4 of Table 69.3, or with equivalent wording, when it is:
- 1) Intended for use on a circuit rated more than 100 amperes, or
 - 2) Intended for field connection with conductors larger than 1 AWG (42.4 mm²).
- o) Where required by the Exception to 16.3.1, the instruction manual shall include a statement indicating that Class 1 wiring methods are to be used for field wiring connections to terminals of a Class 2 circuit.
- p) The instruction manual for a 3-phase generator shall include the following electrical ratings:
- 1) Delta or wye phase configuration when the unit is limited to only one configuration, and
 - 2) Unbalanced load capability when the output has a neutral conductor.
- q) Where required by 8.17, the instruction manual shall include instructions for battery installation and replacement.

r) In accordance with 46.4, the instruction manual for a generator tested with a specific product to determine the effects of harmonic voltage distortion shall identify the load equipment intended to be used with the generator by the manufacturer's name and model designation.

s) The instruction manual shall specify that this unit is to be installed so that access is restricted to only qualified service personnel who have been instructed of the reasons for the restrictions applied to the location and about any precautions that must be taken. The instructions shall also state that access shall be through the use of a special tool, or lock and key, or other means of security and shall be controlled by the authority responsible for the location.

t) In accordance with 42.3, a unit provided with a partially installed or incomplete exhaust system shall be provided with instructions as follows: "Exhaust piping and chimneys shall be designed, constructed, and installed in accordance with the Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines, NFPA 37".

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BSR/UL 2353, Standard for Single- and Multi-Layer Insulated Winding Wire

1. Downgrade the Testing Voltage of the Spark Test Described in Section 14

14.2 The test potential for basic or supplementary insulation shall be ~~two times~~ the voltage specified in the electric strength tests of the Standard for Information Technology Equipment - Safety - Part 1: General Requirements, UL 60950-1, or ~~3000~~ 1500 V rms, whichever is greater.

14.2.1 The test potential for reinforced insulation shall be the voltage specified in the electric strength tests of the Standard for Information Technology Equipment - Safety - Part 1: General Requirements, UL 60950-1, or 3000 V rms, whichever is greater.

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