ANSI STANDARDS ACTION

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Contents

American National Standards

Call for comment on proposals listed

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

Ordering Instructions for "Call-for-Comment" Listings

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

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

* Standard for consumer products

ISSN 0038-9633

Comment Deadline: September 16, 2012

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

Addenda

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

The modifications to the standard intend to clarify when the airspace R-values can be used. The criterion was taken from the original research (Housing Research Paper No. 32), which was the source of the Handbook of Fundamentals table.

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 bg 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 updates the exception related to storm windows under envelope alterations. Storm windows/glazing panels added over existing windows can be either inside or outside, but this is not clear in the current language. Additionally, these products are often referred to by names other than storm windows, and the term “panel” is more accurate, particularly for products added to the interior of the window.

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 bh 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 Lighting Power Density tables to make them consistent with the new IES lighting Handbook. In addition, some new occupancy spaces have been added to the table.

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 bi 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 harmonizes the minimum energy efficiencies of 3-phase air-cooled commercial air conditioners and heat pumps less than 65,000 Btu/h with the efficiencies adopted by DOE for residential central air conditioners.

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 bj 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 re-establishes the product class for small duct high velocity air conditioners and heat pumps. The minimum energy efficiency levels proposed are 11 SEER for air conditioners and 11 SEER/6.8 HSPF for heat pumps that are identical to the efficiencies established by DOE for single-phase residential SDHV products.

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

This proposal amends the minimum energy efficiency requirements for standard-size packaged terminal air conditioners and raises the minimum EER to the same level as the packaged terminal heat pumps. This new minimum efficiency will become effective on January 1, 2015.

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 bl 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 includes a methodology for removing the fan energy from packaged equipment efficiency ratings. This methodology is consistent with that currently in use by other codes and guidelines such as the State of California, Title 24, and the New Buildings Institute, Comnet. The inclusion of this methodology is necessary for maintaining consistent baseline building packaged equipment efficiency ratings between all users.

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

The addendum expands the submetering requirements to cover all fuels that are used by a building.

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 bo 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 service water heating efficiency requirements in Standard 90.1 for electric water heaters, heat pump pool heaters, and oil storage water heaters.

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 bp 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 adds minimum efficiencies for evaporative condensers used in ammonia-based refrigeration systems, and updates references to cooling tower references published by the Cooling Tower Institute.

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

This proposal adds mechanical and lighting efficiency requirements for refrigerator freezer display cases.

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

This proposed addendum revises the requirements for the use of exhaust air energy recovery as defined in table 6.5.6.1.

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 bu 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 adds an exception to using waterside economizers. The Recommended Range for Class 1 & 2 Data Centers published by TC9.9 in the Thermal Guidelines Book indicates a lower bound of 42F DP. Uptime Institute and TIA942 Tier II through IV Data Center designs are required to be humidified.

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

This revision of the toplighting requirements reduces the space area threshold, adds single-story buildings, and expands the list of spaces where daylight would not adversely affect operation of the space (such as a movie theater seating area where daylight is not appropriate).

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

This revision to the building/fenestration orientation requirements provides more specific requirements for east- and west-facing fenestration while also providing more flexibility for complying. Analyses indicate that east- and west-facing fenestration increases building energy consumption compared to north- and south-facing glazing in all climates.

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

The purpose of this proposal is to remove confusion about how the exceptions to the occupancy sensor requirement work and to eliminate one of those exceptions since technology changes make that exception no longer needed.

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

ASME (American Society of Mechanical Engineers)

Revision

BSR/ASME B16.9-201x, Factory-Made Wrought Buttwelding Fittings (revision of ANSI/ASME B16.9-2007)

This Standard covers overall dimensions, tolerances, ratings, testing, and markings for factory-made wrought buttwelding fittings in sizes NPS 1/2 through NPS 48 (DN 15 through DN 1200).

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Frankel Huang, (212) 591-2000, HuangF@asme.org

ASME (American Society of Mechanical Engineers)

Revision

BSR/ASME B16.49-201x, Factory-Made Wrought Steel Buttwelding Induction Bends for Transportation and Distribution Systems (revision of ANSI/ASME B16.49-2007)

This Standard covers design, material, manufacturing, testing, marking, and inspection requirements for factory-made pipeline bends of carbon steel materials having controlled chemistry and mechanical properties, produced by the induction bending process, with or without tangents. This Standard covers induction bends for transportation and distribution piping applications (e.g., ASME B31.4, B31.8, and B31.11). Process and power piping have differing requirements and materials that may not be appropriate for the restrictions and examinations described herein and, therefore, are not included in this Standard.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Frankel Huang, (212) 591-2000, HuangF@asme.org

NSF (NSF International)

Revision

BSR/NSF 50-201x (i86), Equipment for swimming pools, spas, hot tubs, and other recreational water facilities (revision of ANSI/NSF 50-2011)

Issue 86 - The purpose of this ballot is to replace withdrawn Standard ANSI/ASME A112.19.8a with ANSI/APSP 16.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Lorna Badman, (734) 827-6806, badman@nsf.org

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 180-201x, Standard for Safety for Liquid-Level Indicating Gauges for Oil Burner Fuels, Bulletin dated August 17, 2012 (revision of ANSI/UL 180-1997 (R2007))

Proposed Eighth Edition of the Standard for Safety for Liquid-Level Indicating Gauges for Oil Burner Fuels, UL 180, updates coverage of gauge types currently available, and addresses outdated requirements for construction, function, and compatibility that are reflective of the expected uses. The standard makes changes to the following major areas:

(a) Scope and Glossary;

(b) Construction requirements;

(c) Performance requirements; and

(d) Markings and Instructions.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Edward Minasian, (631) 546-3305, Edward.D.Minasian@ul.com

Comment Deadline: October 1, 2012

AAMI (Association for the Advancement of Medical Instrumentation)

New National Adoption

BSR/AAMI 60601-1-2-201x, Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic disturbances - Requirements and tests (identical national adoption of IEC 60601-1-2 and revision of ANSI/AAMI/IEC 60601-1-2, Ed.2-2007 (R2012))

Specifies general requirements and tests for basic safety and essential performance with regard to electromagnetic disturbances of medical electrical (ME) equipment and ME systems. They are in addition to the requirements of the general standard and serve as the basis for particular standards. Applicability of this collateral standard includes ME equipment and ME systems that have been found to have no essential performance.

Single copy price: 25.00/$20.00 (AAMI members)

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

Order from: AAMI Publications; Phone: 1-877-249-8226; Fax: 1-301-206-9789

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

AAMI (Association for the Advancement of Medical Instrumentation)

Reaffirmation

BSR/AAMI/ISO 10993-17-2002 (R201x), Biological evaluation of medical devices - Part 17: Establishment of allowable limits for leachable substances (reaffirmation of ANSI/AAMI/ISO 10993-17-2002 (R2008))

Specifies a method for determining allowable limits for leachable substances from medical devices and describes a systematic process through which identified risks arising from toxicologically hazardous substances present in medical devices can be quantified. Intended for use in deriving standards and estimating appropriate limits where standards do not exist.

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

Obtain an electronic copy from: www.aami.org

Order from: AAMI Publications; Phone: 1-877-249-8226; Fax: 1-301-206 -9789

Send comments (with copy to psa@ansi.org) to: Susan Gillespie, (703) 253 -8284, sgillespie@aami.org

AAMI (Association for the Advancement of Medical Instrumentation)

Reaffirmation

BSR/AAMI/ISO 13408-3-2006 (R201x), Aseptic processing of health care products - Part 3: Lyophilization (reaffirmation of ANSI/AAMI/ISO 13408-3 -2006)

Specifies requirements for and offers guidance on equipment, processes, programs and procedures for the control and validation of lyophilization as an aseptic process. It does not address the physical/chemical objectives of a lyophilization process.

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

Obtain an electronic copy from: www.aami.org

Order from: AAMI Publications; Phone: 1-877-249-8226; Fax: 1-301-206 -9789

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

AAMI (Association for the Advancement of Medical Instrumentation)

Reaffirmation

BSR/AAMI/ISO 13408-4-2005 (R201x), Aseptic processing of health care products - Part 4: Clean-in-place technologies (reaffirmation of ANSI/AAMI/ISO 13408-4-2005)

Specifies the general requirements for clean-in-place (CIP) processes applied to product contact surfaces of equipment used in the manufacture of sterile health care products by aseptic processing and offers guidance on qualification, validation, operation and control. This document applies to processes where cleaning agents are delivered to the internal surfaces of equipment designed to be compatible with CIP that may come in contact with the product.

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

Obtain an electronic copy from: www.aami.org

Order from: AAMI Publications; Phone: 1-877-249-8226; Fax: 1-301-206 -9789

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

AAMI (Association for the Advancement of Medical Instrumentation)

Reaffirmation

BSR/AAMI/ISO 13408-5-2006 (R201x), Aseptic processing of health care products - Part 5: Sterilization in place (reaffirmation of ANSI/AAMI/ISO 13408-5-2006)

Specifies the general requirements for sterilization in place (SIP) applied to product contact surfaces of the equipment used in the manufacture of sterile health care products by aseptic processing and offers guidance on qualification, validation, operation and control. This document applies to processes where sterilizing agents are delivered to the internal surfaces of the equipment that can come in contact with the product.

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

Obtain an electronic copy from: www.aami.org

Order from: AAMI Publications; Phone: 1-877-249-8226; Fax: 1-301-206 -9789

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

APA (APA - The Engineered Wood Association)

Revision

BSR/APA PRG 320-201x, Standard for Performance-Rated Cross-Laminated Timber (revision of ANSI/APA PRG 320-2011)

This standard covers manufacturing, qualification, quality assurance, design, and installation requirements for performance-rated cross-laminated timber products.

Single copy price: Free

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

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

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

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

Addenda

BSR/ASHRAE/IES Addendum br 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 updates the motor definitions in Chapter 3 and the motor efficiency tables in Chapter 10 to make sure that end-users and code officials have the most updated information. In addition, the efficiency requirements for motors that were produced before December 19, 2010, have been removed, since they are no longer allowed to be manufactured in or imported into the Unites States.

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.)

New Standard

BSR/IES/ASHRAE Standard 202P-201x, Commissioning Process for Buildings and Systems (new standard)

The purpose of this standard is to identify the minimum acceptable commissioning process for buildings and systems.

Single copy price: $35.00

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

Order from: standards.section@ashrae.org

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

ASME (American Society of Mechanical Engineers)

Revision

BSR/ASME B16.20-2007, Metallic Gaskets for Pipe Flanges (Ring-Joint, Spiral-Wound, and Jacketed) (revision of ANSI/ASME B16.20-2007)

This Standard covers materials, dimensions, tolerances, and markings for metal ring-joint gaskets, spiral-wound metal gaskets, metal-jacketed gaskets, and grooved metal gaskets with covering layer. These gaskets are dimensionally suitable for use with flanges described in reference flange standards ASME B16.5, ASME B16.47, API Specification 6A, and ISO 10423.

Single copy price: Free

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

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

Send comments (with copy to psa@ansi.org) to: Frankel Huang, (212) 591-2000, HuangF@asme.org

ASME (American Society of Mechanical Engineers)

Revision

BSR/ASME B16.25-2007, Buttwelding Ends (revision of ANSI/ASME B16.25-2007)

This Standard covers the preparation of buttwelding ends of piping components to be joined into a piping system by welding. It includes requirements forwelding bevels, for external and internal shaping of heavy-wall components, and for preparation of internal ends (including dimensions and tolerances). Coverage includes preparation for joints with the following:

(a) no backing rings;

(b) split or noncontinuous backing rings;

(c) solid or continuous backing rings;

(d) consumable insert rings;

(e) gas tungsten arc welding (GTAW) of the root pass.

Details of preparation for any backing ring must be specified when ordering the component.

Single copy price: Free

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

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

Send comments (with copy to psa@ansi.org) to: Frankel Huang, (212) 591-2000, HuangF@asme.org

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/IEC 60300-3-10-2001, Dependability management - Part 3-10: Application guide - Maintainability (identical national adoption of IEC 60300-3-10:2001)

This International Standard, which forms part of the series of standards in the IEC 60300-3 series, is the application guide for maintainability. It can be used to implement a maintainability program covering the initiation, development and in-service phases of a product, which form part of the tasks described in IEC 60300-2.

Single copy price: $171.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/IEC 61014 Ed 2.0-201x, Programs for reliability growth (identical national adoption of IEC 61014 Ed. 2.0 (2003))

This International Standard specifies requirements and gives guidelines for the exposure and removal of weaknesses in hardware and software items for the purpose of reliability growth.

Single copy price: $214.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/IEC 61025 Ed. 2.0-201x, Fault tree analysis (FTA) (identical national adoption of IEC 61025 Ed. 2.0 (2006))

This International Standard describes fault tree analysis (FTA) and provides guidance on its application as follows:

- definition of basic principles, including describing and explaining the associated mathematical modelling, and the relationships of FTA to other reliability modelling techniques;

- description of the steps involved in performing the FTA identification of appropriate assumptions, events, and failure modes; and

- identification and description of commonly used symbols.

Single copy price: $243.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/IEC 61078 Ed 2.0-201x, Analysis techniques for dependability - Reliability block diagram and boolean methods (identical national adoption of IEC 61078 Ed. 2.0 (2006))

This International Standard describes procedures for modelling the dependability of a system and for using the model in order to calculate reliability and availability measures.

Single copy price: $189.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/IEC 61124 Ed 2.0b-201x, Reliability testing - Compliance tests for constant failure rate and constant failure intensity (identical national adoption of IEC 61124 Ed. 2.0b (2006))

This International Standard gives a number of optimized test plans, the corresponding operating characteristic curves and expected test times. In addition, the algorithms for designing test plans using a spreadsheet program are also given, together with guidance on how to choose test plans.

Single copy price: $322.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/IEC 61164 Ed 2.0-201x, Reliability growth - Statistical test and estimation methods (identical national adoption of IEC 61164 Ed. 2.0 (2004))

This International Standard describes the power law reliability growth model and related projection model and gives step-by-step directions for their use. There are several reliability growth models available, the power law model being one of the most widely used. This standard provides procedures to estimate some or all of the quantities listed in Clauses 4, 6, and 7 of IEC 61014.

Single copy price: $243.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 2859-2-1985, Sampling procedures for inspection by attributes - Part 2: Sampling plans indexed by limiting quality (LQ) for isolated lot inspection (identical national adoption of ISO 2859-2-1985)

ISO 2859-2-1985(E): Sampling procedures for inspection by attributes - Part 2: Sampling plans indexed by limiting quality (LQ) for isolated lot inspection can be used when the switching rules in ISO 2859-1 are not applied. Indexing is by a preferred series of limiting qualities with a consumer's risk usually below 10% and always below 13%.

Single copy price: $126.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 2859-3-2005, Sampling procedures for inspection by attributes - Part 3: Skip-lot sampling procedures (identical national adoption of ISO 2859-3:2005)

ISO 2859-3:2005 specifies generic skip-lot sampling procedures for acceptance inspection by attributes. The purpose of these procedures is to provide a way of reducing the inspection effort on products of high quality submitted by a supplier who has a satisfactory quality assurance system and effective quality controls.

Single copy price: $142.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 2859-5-2005, Sampling procedures for inspection by attributes - Part 5: System of sequential sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection (identical national adoption of ISO 2859-5:2005)

ISO 2859-5:2005(E): Sampling procedures for inspection by attributes - Part 5: System of sequential sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection contains sequential sampling schemes that supplement the ISO 2859-1 acceptance sampling system for inspection by attributes, whereby a supplier, through the economic and psychological pressure of lot non-acceptance, can maintain a process average at least as good as the specified acceptance quality limit, while at the same time provide an upper limit for the risk to the consumer of accepting the occasional poor lot.

Single copy price: $172.00

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 2859-10-2006, Sampling procedures for inspection by attributes - Part 10: Introduction to the ISO 2859 series of standards for sampling for inspection by attributes (identical national adoption of ISO 2859 -10:2006)

ISO 2859-10:2006(E): Sampling procedures for inspection by attributes - Part 10: Introduction to the ISO 2859 series of standards for sampling for inspection by attributes provides a general introduction to acceptance sampling by attributes and provides a brief summary of the attribute sampling schemes and plans used in ISO 2859-1, ISO 2859-2, ISO 2859-3, ISO 2859-4, and ISO 2859-5, which describe specific types of attribute sampling systems. ISO 2859-10:2006 also provides guidance on the selection of the appropriate inspection system for use in a particular situation.

Single copy price: $90.00

Obtain an electronic copy from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 3951-1-2005, Sampling procedures for inspection by variables - Part 1: Specification for single sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection for a single quality characteristic and a single AQL (identical national adoption of ISO 3951 -1:2005)

ISO 3951-1:2005(E): Sampling procedures for inspection by variables - Part 1: Specification for single sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection for a single quality characteristic and a single AQL specifies an acceptance sampling system of single sampling plans for inspection by variables, in which the acceptability of a lot is implicitly determined from an estimate of the percentage of nonconforming items in the process, based on a random sample of items from the lot.

Single copy price: $250.00

Obtain an electronic copy from: standards@asq.org

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 3951-2-2006, Sampling procedures for inspection by variables -- Part 2: General specification for single sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection of independent quality characteristics (identical national adoption of ISO 3951-2:2006)

ISO 3951-2:2006(E): Sampling procedures for inspection by variables - Part 2: General specification for single sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection of independent quality characteristics specifies an acceptance sampling system of single sampling plans for inspection by variables, indexed in terms of the Acceptance Quality Limit (AQL).

Single copy price: $235.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 3951-3-2007, Sampling procedures for inspection by variables - Part 3: Double sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection (identical national adoption of ISO 3951 -3:2007)

ISO 3951-3:2007(E): Sampling procedures for inspection by variables - Part 3: Double sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection specifies an acceptance sampling system of double sampling schemes for inspection by variables for percent nonconforming. It is indexed in terms of the acceptance quality limit (AQL).

Single copy price: $250.00

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 3951-4-2011, Sampling procedures for inspection by variables - Part 4: Procedures for assessment of declared quality levels (identical national adoption of ISO 3951-4:2011)

ISO 3951-4:2011(E): Sampling procedures for inspection by variables - Part 4: Procedures for assessment of declared quality levels establishes sampling plans and procedures by variables that can be used to assess whether the quality level of an entity (lot, process, etc.) conforms to a declared value.

Single copy price: $135.00

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 3951-5-2006, Sampling procedures for inspection by variables - Part 5: Sequential sampling plans indexed by acceptance quality limit (AQL) for inspection by variables (known standard deviation) (identical national adoption of ISO 3951-5:2006)

ISO 3951-5:2006(E): Sampling procedures for inspection by variables - Part 5: Sequential sampling plans indexed by acceptance quality limit (AQL) for inspection by variables (known standard deviation) specifies a system of sequential sampling plans (schemes) for lot-by-lot inspection by variables. The schemes are indexed in terms of a preferred series of acceptance quality limit (AQL) values, ranging from 0,01 to 10, which are defined in terms of percent nonconforming items. The schemes are designed to be applied to a continuing series of lots.

Single copy price: $164.00

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Order from: standards@asq.org

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 5479-1997, Statistical interpretation of data - Tests for departure from the normal distribution (identical national adoption of ISO 5479-1997)

This International Standard gives guidance on methods and tests for use in deciding whether or not the hypothesis of a normal distribution should be rejected, assuming that the observations are independent.

Single copy price: $157.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 7870-1-2007, Control charts - Part 1: General guidelines (identical national adoption of ISO 7870-1:2007)

ISO 7870-1:2007 presents key elements and philosophy of the control chart approach, and identifies a wide variety of control charts (including those related to the Shewhart control chart and those stressing process acceptance or on-line process adjustment).

Single copy price: $104.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 7870-4-2011, Control charts - Part 4: Cumulative sum charts (identical national adoption of ISO 7870-4:2011)

ISO 7870-4:2011(E): Control charts - Part 4: Cumulative sum charts provides statistical procedures for setting up cumulative sum (cusum) schemes for process and quality control using variables (measured) and attribute data. It describes general-purpose methods of decision-making using cumulative sum (cusum) techniques for monitoring, control and retrospective analysis.

Single copy price: $204.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 8422-2006, Sequential sampling plans for inspection by attributes (identical national adoption of ISO 8422:2006)

ISO 8422:2006(E): Sequential sampling plans for inspection by attributes contains sequential sampling plans and procedures for inspection by attributes of discrete items. The plans are indexed in terms of the producer's risk point and the consumer's risk point.

Single copy price: $150.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 8423-2008, Sequential sampling plans for inspection by variables for % nonconforming (known standard deviation) (identical national adoption of ISO 8423:2008)

The purpose of ISO 8423:2008 is to provide procedures for the sequential assessment of inspection results that may be used to induce the supplier to supply lots of a quality having a high probability of acceptance. At the same time, the consumer is protected by a prescribed upper limit to the probability of accepting a lot (or process) of poor quality.

Single copy price: $150.00

Obtain an electronic copy from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 11462-1-2001, Guidelines for implementation of statistical process control (SPC) - Part 1: Elements of SPC (identical national adoption of ISO 11462-1:2001)

Statistical process control (SPC) concerns the use of statistical techniques and/or statistical or stochastic control algorithms to achieve one or more of the following objectives:

- to increase knowledge about a process;
- to steer a process to behave in the desired way; and/or
- to reduce variation of final-product parameters, or in other ways improve performance of a process.

Single copy price: $126.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 11462-2-2010, Guidelines for implementation of statistical process control (SPC) (identical national adoption of ISO 11462-2:2010)

ISO 11462-2:2010(E): Guidelines for implementation of statistical process control (SPC) - Part 2: Catalogue of tools and techniques provides a catalogue of tools and techniques to help an organization in planning, implementation and evaluation of an effective statistical process control (SPC) system. This catalogue gives tools and techniques that are essential for the successful realization of the SPC elements.

Single copy price: $90.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 11648-1-2003, Statistical aspects of sampling from bulk materials - Part 1: General principles (identical national adoption of ISO 11648-1-2003)

This part of ISO 11648 establishes the general principles for the application and statistical treatment of the sampling of bulk materials. It also provides general guidance and examples for estimating necessary variances and checking precision and bias when the average value of a quality characteristic is investigated.

Single copy price: $235.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 13053-1-2011, Quantitative methods in process improvement - Six Sigma - Part 1: DMAIC methodology (identical national adoption of ISO 13053-1:2011)

ISO 13053-1:2011 describes a methodology for the business improvement methodology known as Six Sigma. The methodology typically comprises five phases: define, measure, analyze, improve, and control (DMAIC).

Single copy price: $150.00

Obtain an electronic copy from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 13053-2-2011, Quantitative methods in process improvement - Six Sigma - Part 2: Tools and techniques (identical national adoption of ISO 13053-2:2011)

ISO 13053-2:2011 describes the tools and techniques, illustrated by factsheets, to be used at each phase of the DMAIC approach.

Single copy price: $181.00

Obtain an electronic copy from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 13448-1-2005, Acceptance sampling procedures based on the allocation of priorities principle (APP) (identical national adoption of ISO 13448-1:2005)

ISO 13448-1:2005(E): Acceptance sampling procedures based on the allocation of priorities principle (APP) - Part 1: Guidelines for the APP approach provides guidelines specifying the organizational principles of acceptance sampling in situations where the contract or the legislation provides for successive inspection to be carried out by different parties: the supplier, the customer, and/or a third party

Single copy price: $135.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 14006-2011, Environmental management systems - Guidelines for incorporating ecodesign (identical national adoption of ISO 14006-2011)

This International Standard provides guidelines to assist organizations in establishing, documenting, implementing, maintaining, and continually improving their management of ecodesign as part of an environmental management system (EMS).

Single copy price: $150.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 14015-2001, Environmental Management - Environmental assessment of sites and organizations (EASO) (identical national adoption of ISO 14015:2001)

This International Standard provides guidance on how to conduct an EASO through a systematic process of identifying environmental aspects and environmental issues and determining, if appropriate, their business consequences.

Single copy price: $120.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 14025-2006, Environmental labels and declarations - Type III environmental declarations - Principles and procedures (identical national adoption of ISO 14025-2006)

This International Standard establishes the principles and specifies the procedures for developing Type III environmental declaration programs and Type III environmental declarations. It specifically establishes the use of the ISO 14040 series of standards in the development of Type III environmental declaration programs and Type III environmental declarations.

Single copy price: $135.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 14044-2006, Environmental management - Life cycle assessment - Requirements and guidelines (identical national adoption of ISO 14044-2006)

ISO 14044:2006(E) specifies requirements and provides guidelines for life cycle assessment (LCA) including:

- definition of the goal and scope of the LCA;
- the life cycle inventory analysis (LCI) phase;
- the life cycle impact assessment (LCIA) phase;
- the life cycle interpretation phase;
- reporting and critical review of the LCA;
- limitations of the LCA;
- relationship between the LCA phases; and
- conditions for use of value choices and optional elements.

Single copy price: $181.00

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 14050-2009, Environmental management - Vocabulary (identical national adoption of ISO 14050:2009)

ISO 14050:2009(E) defines terms of fundamental concepts related to environmental management, published in the ISO 14000 series of International Standards.

Single copy price: $285.00

Obtain an electronic copy from: standards@asq.org

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 14051-2011, Environmental management - Material flow cost accounting - General framework (identical national adoption of ISO 14051:2011)

ISO 14051:2011(E) provides a general framework for material flow cost accounting (MFCA). Under MFCA, the flows and stocks of materials within an organization are traced and quantified in physical units (e.g., mass, volume) and the costs associated with those material flows are also evaluated.

Single copy price: $164.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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

ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 14063-2006, Environmental management - Environmental communication - Guidelines and examples (identical national adoption of ISO 14063-2006)

This International Standard gives guidance to an organization on general principles, policy, strategy, and activities relating to both internal and external environmental communication. It utilizes proven and well-established approaches for communication, adapted to the specific conditions that exist in environmental communication. It is applicable to all organizations regardless of their size, type, location, structure, activities, products, and services, and whether or not they have an environmental management system in place.

Single copy price: $142.00

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 14066-2011, Greenhouse gases - Competence requirements for greenhouse gas validation teams & verification teams (identical national adoption of ISO 14066:2011)

ISO 14066:2011 specifies competence requirements for validation teams and verification teams. ISO 14066:2011 complements the implementation of ISO 14065.

Single copy price: $135.00

Obtain an electronic copy from: standards@asq.org

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 16269-4-2010, Statistical interpretation of data - Part 4: Detection and treatment of outliers (identical national adoption of ISO 16269 -4-2010)

This part of ISO 16269 provides detailed descriptions of sound statistical testing procedures and graphical data analysis methods for detecting outliers in data obtained from measurement processes. It recommends sound robust estimation and testing procedures to accommodate the presence of outliers.

Single copy price: $192.00

Obtain an electronic copy from: standards@asq.org

Order from: standards@asq.org

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 18414-2006, Acceptance sampling procedures by attributes (identical national adoption of ISO 18414:2006)

ISO 18414:2006: Acceptance sampling procedures by attributes - Accept-zero sampling system based on credit principle for controlling outgoing quality specifies a system of single sampling schemes for lot-by-lot inspection by attributes. All the sampling plans of the system are of accept-zero form, i.e., no lot is accepted if the sample from it contains one or more nonconforming items.

Single copy price: $80.00

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ASQ (ASC Z1) (American Society for Quality)

New National Adoption

BSR/ASQ/ISO 21747-2006, Statistical methods (identical national adoption of ISO 21747:2006)

ISO 21747:2006(E): Statistical methods - Process performance and capability statistics for measured quality characteristics describes a procedure for the determination of statistics in order to estimate the quality capability of product and process characteristics.

Single copy price: $150.00

Obtain an electronic copy from: standards@asq.org

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

ATIS (Alliance for Telecommunications Industry Solutions)

Withdrawal

ANSI ATIS 0700001-2004 (R2009), SB Physical, MAC/LLC, & Network Layer Specifications - Multi-Carrier Synchronous Beamforming (MCSB) Air Interface (withdrawal of ANSI ATIS 0700001-2004 (R2009))

This document specifies the Multi-Carrier Synchronous Beamforming (MCSB) Air Interface for a Point to Multipoint System. The technology described in this document is based in part on existing Code Division Multiple Access (CDMA) technologies with the use of Smart Antennas. The combination provides enhanced transmission quality to achieve broadband data rates in Non Line of Sight (NLOs) environments. The content includes Layer 1 Physical properties, Layer 2 Data Link properties, and Layer 3 Network properties.

Single copy price: $300.00

Obtain an electronic copy from: kconn@atis.org

Order from: Kerrianne Conn, (202) 434-8841, kconn@atis.org

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

ATIS (Alliance for Telecommunications Industry Solutions)

Withdrawal

ANSI ATIS 0700716-2000 (R2009), Air Interface Standard for Broadband Direct Sequence CDMA for Fixed Wireless PSTN Access - Layer 1 (withdrawal of ANSI ATIS 0700716-2000 (R2009))

This document specifies the transmit functions of Layer 1 to define the air interface for a Broadband Direct Sequence CDMA system for fixed wireless PSTN access. This document provides the detailed definition of all component entities within Layer 1, and the services and primitives provided to other layers by Layer 1.

Single copy price: $200.00

Obtain an electronic copy from: kconn@atis.org

Order from: Kerrianne Conn, (202) 434-8841, kconn@atis.org

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

ATIS (Alliance for Telecommunications Industry Solutions)

Withdrawal

ANSI ATIS 0700723-2002 (R2011), I-CDMA Spread Spectrum Systems Air Interface Standard - Stage 3 Text (withdrawal of ANSI ATIS 0700723-2002 (R2011))

This standard defines the detailed description of the air interface of Internet Code Division Multiple Access (I-CDMA). This volume describes all aspects of the air interface that exists between the Access Terminal (AT) and the Base Station Router (BSR). It covers the three lowest layers (physical layer, link layer and network layer) analogous to the OSI Network Layer model. It also satisfies the requirements for the radio and network aspects of Wireless Wideband InterNet Access (WWINA) system that are optimized for Internet data applications in low mobility (handoff) environments.

Single copy price: $425.00

Obtain an electronic copy from: kconn@atis.org

Order from: Kerrianne Conn, (202) 434-8841, kconn@atis.org

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

AWWA (American Water Works Association)

New Standard

BSR/AWWA B101-200x, Precoat Filter Media (new standard)

This standard describes diatomaceous earth (DE), perlite, and other disposable filter materials used to precoat filters for water supply service.

Single copy price: $20.00

Obtain an electronic copy from: vdavid@awwa.org

Order from: Paul Olson, (303) 347-6178, polson@awwa.org

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

AWWA (American Water Works Association)

Revision

BSR/AWWA C800-201x, Underground Service Line Valves and Fittings (revision of ANSI/AWWA C800-2005)

This standard covers valves, fittings, service saddles, and meter setters for use in service line from the main through the meter valve or meter-setting appurtenance. Valves, fittings, and meter setters described in this standard include 1/2 in. (12.5 mm) through 2 in. (50.8 mm).

Single copy price: $20.00

Obtain an electronic copy from: vdavid@awwa.org

Order from: Paul Olson, (303) 347-6178, polson@awwa.org

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

FCI (Fluid Controls Institute)

Revision

BSR/FCI 70-2-201x, Control Valve Seat Leakage (revision of ANSI/FCI 70-2-2006)

This standard establishes a series of seat leakage classes for control valves and defines production test procedures.

Single copy price: Free

Obtain an electronic copy from: fci@fluidcontrolsinstitute.org

Order from: Leslie Schraff, (216) 241-7333, fci@fluidcontrolsinstitute.org

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

FM (FM Approvals)

New Standard

BSR/FM 3640-201x, Land Mobile Radios for Use in Class I, Division 1 Hazardous (Classified) Locations (new standard)

Provides requirements for the construction and testing, utilizing a double protection method, of Land Mobile Radios or parts of such apparatus, whose circuits are incapable of causing ignition in: Classes I, Division 1 hazardous (classified) locations as defined in Article 500 of the National Electrical Code (R), ANSI/NFPA 70 (NEC (R)).

Single copy price: Free

Obtain an electronic copy from: josephine.mahnken@fmapprovals.com

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

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

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

New National Adoption

BSR/INICTS/ISO/IEC 16680-201x, Information technology - The Open Group Service Integration Maturity Model (OSIMM) (identical national adoption of ISO/IEC 16680:2012)

Specifies a model against which the degree of service integration maturity of an organization can be assessed, and a process for assessing the current and desired degree of service integration maturity of an organization, using the model.

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

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

NEMA (ASC C29) (National Electrical Manufacturers Association)

New Standard

BSR C29.13-200x, Standards for Insulators - Composite Distribution Deadend Type (new standard)

This standard covers composite distribution deadend insulators made of a fiberglass-reinforced resin matrix core, polymer material weathersheds, and metal end fittings intended for use on overhead lines for electric power systems, 69 kV and below.

Single copy price: $44.00

Order from: Steve Griffith, 703-841-3297, Steve.Griffith@nema.org

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

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

Reaffirmation

BSR IT8.6-2002 (R201x), Graphic technology - Prepress digital data exchange - Diecutting data (DDES3) (reaffirmation of ANSI IT8.6-2002 (R2007))

This standard establishes a data exchange format to enable transfer of numerical control information between diecutting systems and between diecutting systems and electronic prepress systems. The information will typically consist of numerical control information used in the manufacture of dies.

Single copy price: $22.00

Obtain an electronic copy from: dorf@npes.org

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

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

PLASA (PLASA North America)

New Standard

BSR E1.37-2-201x, Additional Message Sets for ANSI E1.20 (RDM) - Part 2: IPv4 & DNS Configuration Messages (new standard)

This draft standard is part 2 of the E1.37 project. It provides additional get/set parameter messages (PIDs) for use with the ANSI E1.20 Remote Device Management protocol. Messages in this document are intended for configuring network interfaces and Domain Name System settings on devices with an IPv4 address.

Single copy price: Free

Obtain an electronic copy from: http://tsp.plasa.org/tsp/documents/public_review_docs.php

Order from: Karl Ruling, (212) 244-1505, karl.ruling@plasa.org

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

PLASA (PLASA North America)

New Standard

BSR/PLASA E1.45-201x, Transport of IEEE 802 data frames over ANSI E1.11 (DMX512-A) (new standard)

This Standard defines a minimal method to transport IEEE 802 data frames over ANSI E1.11 physical links using an Alternate START Code. The primary motivation is to allow communication of 802 data to luminaires over a ANSI E1.11 DMX512-A datalink for data transmission from those luminaires using Visible Light Communication, IEEE 802.15.7. However, this Standard may be used to transport any 802 data for any purpose.

Single copy price: Free

Obtain an electronic copy from: http://tsp.plasa.org/tsp/documents/public_review_docs.php

Order from: Karl Ruling, (212) 244-1505, karl.ruling@plasa.org

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

PMI (Project Management Institute)

Revision

BSR/PMI 99-001-201X, A Guide to the Project Management Body of Knowledge - Fifth Edition (PMBOK (R) Guide - Fifth Edition) (revision of ANSI/PMI 99-001-2008)

A Guide to the Project Management Body of Knowledge - Fifth Edition (PMBOK (R) Guide - Fifth Edition)is a basic reference and the de facto global standard for the project management profession. The PMBOK (R) Guide identifies and describes the subset of the PMBOK (R) that is generally recognized as good practice.

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

TAPPI (Technical Association of the Pulp and Paper Industry)

New Standard

BSR/TAPPI T 1500 gl-201x, Optical measurements terminology (related to appearance evaluation of paper) (new standard)

This glossary defines terms used in the pulp and paper industry relating to both visual and instrumental evaluations of appearance. This technical terminology includes such optical assessments such as brightness, whiteness, color, gloss, opacity, scattering, absorption, etc.

Single copy price: Free

Obtain an electronic copy from: standards@tappi.org

Order from: Charles Bohanan, (770) 209-7276, standards@tappi.org

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

UL (Underwriters Laboratories, Inc.)

New Standard

BSR/UL 1416-201x, Standard for Safety for Overcurrent and Overtemperature Protectors for Radio- and Television-Type Appliances (new standard)

Covers over-temperature protectors, and over-current protectors to be employed in radio- and television-type appliances in applications where the protectors are relied upon to limit power, current, or both and where the equipment is to be supplied by a maximum 20-A branch circuit.

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 471-201x, Standard for Safety for Commercial Refrigerators and Freezers (revision of ANSI/UL 471-2011)

The following is being proposed:

(1) Addition of requirements with respect to laboratory freezers with a limited charge system.

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: Jeff Prusko, (847) 664-3416, jeffrey.prusko@ul.com

Comment Deadline: October 16, 2012

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

AGMA (American Gear Manufacturers Association)

Revision

BSR/AGMA 9002-C201x, Bores and Keyways for Flexible Couplings (Inch Series) (revision and redesignation of ANSI/AGMA 9002-B2004 (R2011))

This standard presents inch dimensions, tolerances, and sizes for straight bores, tapered bores, single keys and keyways for unmounted industrial flexible couplings. The keys are square or rectangular. This specification includes index tolerances for multiple keyways.

Single copy price: $60.00

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 9112-B-201x, Bores and Keyways for Flexible Couplings (Metric Series) (revision of ANSI/AGMA 9112-A-2004 (R2011))

This standard presents metric dimensions, tolerances, sizes and fits for straight bores, tapered bores, keys and keyways for unmounted industrial flexible couplings. This specification includes index tolerances for multiple keyways.

Single copy price: $55.00

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

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

ANS (American Nuclear Society)

New Standard

BSR/ANS 3.4-201x, Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants (new standard)

This standard defines the medical and psychological requirements for licensing of nuclear power plant reactor operators and senior operators. It also addresses the content, extent, methods of examination, and monitoring during the term of the license.

Single copy price: $30.00

Obtain an electronic copy from: orders@ans.org; scook@ans.org

Order from: Sue Cook, (708) 579-8210, orders@ans.org; scook@ans.org

Send comments (with copy to psa@ansi.org) to: Patricia Schroeder, (708) 579-8269, pschroeder@ans.org

ASSE (ASC A10) (American Society of Safety Engineers)

Revision

BSR ASSE A10.46-201X, Hearing Loss Prevention in Construction and Demolition Workers (revision of ANSI ASSE A10.46-2007)

This standard is intended to help employers prevent occupational hearing loss among construction and demolition workers.

Single copy price: $50.00

Obtain an electronic copy from: TFisher@ASSE.Org

Order from: Timothy Fisher, (847) 768-3411, TFisher@ASSE.Org

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

IEEE (Institute of Electrical and Electronics Engineers)

New Standard

BSR/IEEE 24774-201x, Guide - Adoption of ISO/IEC TR 24474:2010 Systems and Software Engineering - Life Cycle Management - Guidelines for Process Description (new standard)

This Technical Report provides guidelines for the description of processes by identifying descriptive elements and rules for their formulation. It characterizes the following elements of process description:

- Title;
- Purpose;
- Outcomes;
- Activities;
- Tasks; and
- Information items.

In addition, process views are described.

Single copy price: 80.00 (pdf); $95.00 (printed)

Order from: IEEE, +1-800-678-4333; fax:+1-732-981-9667; online: http://standards.ieee.org/store

Send comments (with copy to psa@ansi.org) to: Karen Evangelista, (732) 562-3854, k.evangelista@ieee.org

IEEE (Institute of Electrical and Electronics Engineers)

New Standard

BSR/IEEE C37.118.1-201x, Standard for Synchrophasor Measurements for Power Systems (new standard)

This standard is for synchronized phasor measurement systems in power systems. It defines a synchronized phasor (synchrophasor), frequency and rate of change of frequency measurements. It describes time tag and synchronization requirements for measurement of all three of these quantities. It specifies methods for evaluating these measurements, and requirements for compliance with the standard under both static and dynamic conditions. It defines a Phasor Measurement Unit (PMU), which can be a stand-alone physical unit or a functional unit within another physical unit.

Single copy price: 82.00 (pdf); $103.00 (printed)

Order from: IEEE, +1-800-678-4333; fax:+1-732-981-9667; online: http://standards.ieee.org/store

Send comments (with copy to psa@ansi.org) to: Karen Evangelista, (732) 562-3854, k.evangelista@ieee.org

NEMA (ASC C29) (National Electrical Manufacturers Association)

Reaffirmation

BSR C29.12-1997 (R201x), Standard for Insulators - Composite-Suspension Type (reaffirmation of ANSI C29.12-1997 (R2002))

This standard describes the qualification test procedures for composite line post insulators that are made of a fiberglass-reinforced resin matrix core, elastomeric weathersheds and metal end fittings. These insulators are intended for use on overhead lines in electric power systems, 70 kV and above.

Single copy price: $44.00

Order from: Steve Griffith, 703-841-3297, Steve.Griffith@nema.org

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

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: *Hae Choe*

Phone: (703) 253-8268

Fax: (703) 276-0793

E-mail: HChoe@aami.org

BSR/AAMI 60601-1-2-201x, Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic disturbances - Requirements and tests (identical national adoption of IEC 60601-1-2 and revision of ANSI/AAMI/IEC 60601-1-2, Ed.2-2007 (R2012))

BSR/AAMI SW91-201x, Classification of defects contributing to unacceptable risk in health software (new standard)

BSR/AAMI/IEC 62366-2007/A1-201x, Medical devices - Application of usability engineering to medical devices, Amendment 1 (identical national adoption of IEC 62366 am1 Ed. 1.0)

BSR/AAMI/ISO 13408-3-2006 (R201x), Aseptic processing of health care products - Part 3: Lyophilization (reaffirmation of ANSI/AAMI/ISO 13408-3-2006)

BSR/AAMI/ISO 13408-4-2005 (R201x), Aseptic processing of health care products - Part 4: Clean-in-place technologies (reaffirmation of ANSI/AAMI/ISO 13408-4-2005)

BSR/AAMI/ISO 13408-5-2006 (R201x), Aseptic processing of health care products - Part 5: Sterilization in place (reaffirmation of ANSI/AAMI/ISO 13408-5-2006)

ASQ (ASC Z1) (American Society for Quality)

Office: 600 N Plankinton Ave
Milwaukee, WI 53201

Contact: *Jennifer Admussen*

Phone: (414) 272-8575

Fax: (414) 272-1734

E-mail: jadmussen@asq.org

BSR/ASQ/IEC 60300-3-10-2001, Dependability management - Part 3 -10: Application guide - Maintainability (identical national adoption of IEC 60300-3-10:2001)

BSR/ASQ/IEC 60300-3-3 Ed. 2.0 (2005)-, Dependability management - Part 3-3: Application guide - Life cycle costing (identical national adoption of IEC 60300-3-3 Ed. 2.0 (2005):)

BSR/ASQ/IEC 60812 Ed. 2.0 b-2006, Analysis Techniques for System Reliability - Procedure for Failure Mode and Effects Analysis (identical national adoption of IEC 60812 Ed. 2.0 b:2006)

BSR/ASQ/IEC 61014 Ed 2.0-201x, Programs for reliability growth (identical national adoption of IEC 61014 Ed. 2.0 (2003))

BSR/ASQ/IEC 61025 Ed. 2.0-201x, Fault tree analysis (FTA) (identical national adoption of IEC 61025 Ed. 2.0 (2006))

BSR/ASQ/IEC 61078 Ed 2.0-201x, Analysis techniques for dependability - Reliability block diagram and boolean methods (identical national adoption of IEC 61078 Ed. 2.0 (2006))

BSR/ASQ/IEC 61124 Ed 2.0b-201x, Reliability testing - Compliance tests for constant failure rate and constant failure intensity (identical national adoption of IEC 61124 Ed. 2.0 b (2006))

BSR/ASQ/IEC 61164 Ed 2.0-201x, Reliability growth - Statistical test and estimation methods (identical national adoption of IEC 61164 Ed. 2.0 (2004))

BSR/ASQ/ISO 2859-2-1985, Sampling procedures for inspection by attributes - Part 2: Sampling plans indexed by limiting quality (LQ) for isolated lot inspection (identical national adoption of ISO 2859-2 -1985)

BSR/ASQ/ISO 2859-3-2005, Sampling procedures for inspection by attributes - Part 3: Skip-lot sampling procedures (identical national adoption of ISO 2859-3:2005)

BSR/ASQ/ISO 2859-5-2005, Sampling procedures for inspection by attributes - Part 5: System of sequential sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection (identical national adoption of ISO 2859-5:2005)

BSR/ASQ/ISO 2859-10-2006, Sampling procedures for inspection by attributes - Part 10: Introduction to the ISO 2859 series of standards for sampling for inspection by attributes (identical national adoption of ISO 2859-10:2006)

BSR/ASQ/ISO 3951-1-2005, Sampling procedures for inspection by variables - Part 1: Specification for single sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection for a single quality characteristic and a single AQL (identical national adoption of ISO 3951-1:2005)

BSR/ASQ/ISO 3951-2-2006, Environmental management - Environmental communication - Guidelines and examples (identical national adoption of ISO 3951-2:2006)

BSR/ASQ/ISO 3951-3-2007, Sampling procedures for inspection by variables - Part 3: Double sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection (identical national adoption of ISO 3951-3:2007)

BSR/ASQ/ISO 3951-4-2011, Sampling procedures for inspection by variables - Part 4: Procedures for assessment of declared quality levels (identical national adoption of ISO 3951-4:2011)

BSR/ASQ/ISO 3951-5-2006, Sampling procedures for inspection by variables - Part 5: Sequential sampling plans indexed by acceptance quality limit (AQL) for inspection by variables (known standard deviation) (identical national adoption of ISO 3951-5:2006)

BSR/ASQ/ISO 5479-1997, Statistical interpretation of data - Tests for departure from the normal distribution (identical national adoption of ISO 5479-1997)

BSR/ASQ/ISO 7870-1-2007, Control charts - Part 1: General guidelines (identical national adoption of ISO 7870-1:2007)

BSR/ASQ/ISO 7870-4-2011, Control charts - Part 4: Cumulative sum charts (identical national adoption of ISO 7870-4:2011)

BSR/ASQ/ISO 8422-2006, Sequential sampling plans for inspection by attributes (identical national adoption of ISO 8422:2006)

BSR/ASQ/ISO 8423-2008, Sequential sampling plans for inspection by variables for % nonconforming (known standard deviation) (identical national adoption of ISO 8423:2008)

BSR/ASQ/ISO 11462-1-2001, Guidelines for implementation of statistical process control (SPC) - Part 1: Elements of SPC (identical national adoption of ISO 11462-1:2001)

BSR/ASQ/ISO 11462-2-2010, Guidelines for implementation of statistical process control (SPC) - Part 2: Catalogue of tools and techniques (identical national adoption of ISO 11462-2:2010)

BSR/ASQ/ISO 11648-1-2003, Statistical aspects of sampling from bulk materials - Part 1: General principles (identical national adoption of ISO 11648-1-2003)

BSR/ASQ/ISO 13053-1-2011, Quantitative methods in process improvement - Six Sigma - Part 1: DMAIC methodology (identical national adoption of ISO 13053-1:2011)

BSR/ASQ/ISO 13053-2-2011, Quantitative methods in process improvement - Six Sigma - Part 2: Tools and techniques (identical national adoption of ISO 13053-2:2011)

BSR/ASQ/ISO 13448-1-2005, Acceptance sampling procedures based on the allocation of priorities principle (APP) (identical national adoption of ISO 13448-1:2005)

BSR/ASQ/ISO 14006-2011, Environmental management systems - Guidelines for incorporating ecodesign (identical national adoption of ISO 14006 - 2011)

BSR/ASQ/ISO 14015-2001, Environmental Management - Environmental assessment of sites and organizations (EASO) (identical national adoption of ISO 14015:2001)

BSR/ASQ/ISO 14024-2001, Environmental labels and declarations - Type 1 environmental labeling - Principles and Procedures (identical national adoption of ISO 14024-2001)

BSR/ASQ/ISO 14025-2006, Environmental labels and declarations - Type III environmental declarations - Principles and procedures (identical national adoption of ISO 14025-2006)

BSR/ASQ/ISO 14044-2006, Environmental management - Life cycle assessment - Requirements and guidelines (identical national adoption of ISO 14044-2006)

BSR/ASQ/ISO 14050-2009, Environmental management - Vocabulary (identical national adoption of ISO 14050:2009)

BSR/ASQ/ISO 14051-2011, Environmental management - Material flow cost accounting - General framework (identical national adoption of ISO 14051:2011)

BSR/ASQ/ISO 14063-2006, Environmental management - Environmental communication - Guidelines and examples (identical national adoption of ISO 14063-2006)

BSR/ASQ/ISO 14066-2011, Greenhouse gases - Competence requirements for greenhouse gas validation teams & verification teams (identical national adoption of ISO 14066:2011)

BSR/ASQ/ISO 16269-4-2010, Statistical interpretation of data - Part 4: Detection and treatment of outliers (identical national adoption of ISO 16269-4-2010)

BSR/ASQ/ISO 18414-2006, Acceptance sampling procedures by attributes - Accept-zero sampling system based on credit principle for controlling outgoing quality (identical national adoption of ISO 18414:2006)

BSR/ASQ/ISO 21747-2006, Statistical methods (identical national adoption of ISO 21747:2006)

ASSE (ASC A10) (American Society of Safety Engineers)

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Fax: (847) 296-9221

E-mail: TFisher@ASSE.org

BSR ASSE A10.46-201X, Hearing Loss Prevention in Construction and Demolition Workers (revision of ANSI ASSE A10.46-2007)

FCI (Fluid Controls Institute)

Office: 1300 Sumner Avenue
Cleveland, OH 44115

Contact: *Leslie Schraff*

Phone: (216) 241-7333

Fax: (216) 241-0105

E-mail: fci@fluidcontrolsinstitute.org

BSR/FCI 70-2-201x, Control Valve Seat Leakage (revision of ANSI/FCI 70-2-2006)

BSR/FCI 99-2-201x, Pressure Reducing Regulator Capacity (revision of ANSI/FCI 99-2-2004)

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

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

Contact: *Deborah Spittle*

Phone: (202) 626-5746

Fax: (202) 638-4922

E-mail: dspittle@itic.org

BSR/INICTS/ISO/IEC 16680-201x, Information technology - The Open Group Service Integration Maturity Model (OSIMM) (identical national adoption of ISO/IEC 16680:2012)

NEMA (ASC C29) (National Electrical Manufacturers Association)

Office: 1300 North 17th Street, Suite 1752
Rosslyn, VA 22209

Contact: *Steve Griffith*

Phone: 703-841-3297

Fax: 703-841-3397

E-mail: Steve.Griffith@nema.org

BSR C29.12-1997 (R201x), Standard for Insulators - Composite-Suspension Type (reaffirmation of ANSI C29.12-1997 (R2002))

BSR C29.13-200x, Standards for Insulators - Composite Distribution Deadend Type (new standard)

NSF (NSF International)

Office: 789 N. Dixboro Road
Ann Arbor, MI 48104

Contact: *Maureen Sertich*

Phone: 734-214-6233

Fax: 734-827-7875

E-mail: msertich@nsf.org

BSR/NSF 416-201x, Sustainability Assessment for Water and Wastewater Chemicals (new standard)

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.

AGA (ASC Z380) (American Gas Association)

Addenda

ANSI/GPTC Z380.1-2012, Addendum No. 1-2012, Guide for Gas Transmission and Distribution Piping Systems (addenda to ANSI/GPTC Z380.1-2012): 8/15/2012

ASSE (American Society of Sanitary Engineering)

Revision

ANSI/ASSE Series 6000-2012, Professional Qualifications Standard for Medical Gas Systems Personnel (revision of ANSI/ASSE 6000 -2006): 8/14/2012

ATIS (Alliance for Telecommunications Industry Solutions)

New Standard

ANSI ATIS 1000050-2012, NGN Operator Intercept Service (new standard): 8/9/2012

CSA (CSA Group)

Addenda

* ANSI Z21.18b-2012, Standard for Gas Appliance Pressure Regulators (same as CSA 6.3b) (addenda to ANSI Z21.18-2007 (R2012) and ANSI Z21.18a-2010): 8/10/2012

Reaffirmation

* ANSI Z83.26-2007 (R2012), Z83.26a-2008 (R2012), American National Standard/CSA Group Standard for Gas-Fired Outdoor Infrared Heaters (reaffirmation of ANSI Z83.26-2007 and ANSI Z83.26a-2008): 8/14/2012

ANSI/CSA NGV2-2007 (R2012), Standard for Compressed Natural Gas Vehicle Fuel Containers (reaffirmation of ANSI/CSA NGV2 -2007): 8/14/2012

Revision

* ANSI Z21.80a-2012, Standard for Line Pressure Regulators (same as CSA 6.22a) (revision of ANSI Z21.80-21-2011): 8/10/2012

IEEE (Institute of Electrical and Electronics Engineers)

Revision

ANSI/IEEE 802.15.4-2011, Standard for Local and Metropolitan Area Networks - Part 15.4: Low-Rate Wireless Personal Area Networks (LRWPANS) (revision of ANSI/IEEE 802.15.4-2006): 8/14/2012

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

Reaffirmation

ANSI INCITS 149-1986 (R2012), Financial Transaction Card Formsets - Location of Imprinted Information (reaffirmation of ANSI INCITS 149-1986 (R2007)): 8/15/2012

ANSI INCITS 364-2003/AM1-2007 (R2012), Information technology - Fibre Channel - 10 Gigabit - Amendment 1 (10GFC/AM1) (reaffirmation of ANSI INCITS 364-2003/AM1-2007): 8/14/2012

ANSI INCITS 374-2003/AM1-2007 (R2012), Information technology - Single-Byte Command Set - 3 (FC-SB-3) - Amendment 1 (FC-SB -3/AM1) (reaffirmation of ANSI INCITS 374-2003/AM1-2007): 8/14/2012

ANSI INCITS 411-2007 (R2012), Information technology - iSCSI Management API, Version 1.1.6 (reaffirmation of ANSI INCITS 411 -2007): 8/14/2012

ANSI INCITS 413-2007 (R2012), Information technology - RapidIO (TM) Interconnect Specification (version 1.3) (reaffirmation of ANSI INCITS 413-2007): 8/14/2012

ANSI INCITS 424-2007 (R2012), Information technology - Fibre Channel Framing and Signaling - 2 (FC-FS-2) (reaffirmation of ANSI INCITS 424-2007): 8/13/2012

ANSI INCITS 424-2007/AM1-2007 (R2012), Information technology - Fibre Channel - Framing and Signaling - 2 - Amendment 1 (FC-FS -2/AM1) (reaffirmation of ANSI INCITS 424-2007/AM1-2007): 8/13/2012

ANSI INCITS 426-2007 (R2012), Information technology - Fibre Channel Security Protocols (FC-SP) (reaffirmation of ANSI INCITS 426-2007): 8/13/2012

ANSI INCITS 427-2007 (R2012), Information technology - Fibre Channel Generic Services-5 (FC-GS-5) (reaffirmation of ANSI INCITS 427-2007): 8/13/2012

ANSI INCITS 428-2007 (R2012), Information technology - Storage Management - Host Bus Adapter Application Programming Interface (SM-HBA) (reaffirmation of ANSI INCITS 428-2007): 8/14/2012

ANSI INCITS 432-2007 (R2012), Information technology - Fabric Application Interface Standard (FAIS) (reaffirmation of ANSI INCITS 432-2007): 8/14/2012

ANSI INCITS 433-2007 (R2012), Information technology - Fibre Channel - Link Services (FC-LS) (reaffirmation of ANSI INCITS 433 -2007): 8/13/2012

ANSI INCITS 435-2007 (R2012), Information technology - Fibre Channel BaseT (FC-BaseT) (reaffirmation of ANSI INCITS 435 -2007): 8/14/2012

INCITS/ISO/IEC 7816-3-1997 (R2012), Identification cards - Integrated circuit cards - Part 3: Cards with contacts - Electrical interface and transmission protocols (reaffirmation of INCITS/ISO/IEC 7816-3 -1997 (R2004)): 8/15/2012

INCITS/ISO/IEC 10373-5-2007 (R2012), Identification cards - Test methods - Part 5: Optical memory cards (reaffirmation of INCITS/ISO/IEC 10373-5-2007): 8/15/2012

INCITS/ISO/IEC 13818-3-1998 (R2012), Information technology - Generic coding of moving pictures and associated audio information - Part 3: Audio (reaffirmation of INCITS/ISO/IEC 13818-3-1998 (R2007)): 8/15/2012

INCITS/ISO/IEC 13818-6-1998 (R2012), Information technology - Generic coding of moving pictures and associated audio information - Part 6: Extensions for DSM-CC (reaffirmation of INCITS/ISO/IEC 13818-6-1998 (R2007)): 8/15/2012

INCITS/ISO/IEC 13818-9-1996 (R2012), Information technology - Generic coding of moving pictures and associated audio information - Part 9: Extension for real-time interface for system decoders (reaffirmation of INCITS/ISO/IEC 13818-9-1996 (R2007)): 8/15/2012

INCITS/ISO/IEC 14165-414-2007 (R2012), Information technology - Fibre Channel Generic Services-4 (FC-GS-4) (reaffirmation of INCITS/ISO/IEC 14165-414-2007): 8/13/2012

INCITS/ISO/IEC 14496-2-2001 (R2012), Information technology - Coding of audio-visual objects - Part 2: Visual (reaffirmation of INCITS/ISO/IEC 14496-2-2001): 8/15/2012

INCITS/ISO/IEC 15938-1-2002 (R2012), Information technology - Multimedia content description interface - Part 1: Systems (reaffirmation of INCITS/ISO/IEC 15938-1-2002 (R2007)): 8/15/2012

INCITS/ISO/IEC 15938-2-2002 (R2012), Information technology - Multimedia content description interface - Part 2: Description definition language (reaffirmation of INCITS/ISO/IEC 15938-2-2002 (R2007)): 8/15/2012

INCITS/ISO/IEC 15938-3-2002 (R2012), Information technology - Multimedia content description interface - Part 3: Visual (reaffirmation of INCITS/ISO/IEC 15938-3-2002 (R2007)): 8/15/2012

INCITS/ISO/IEC 15938-4-2002 (R2012), Information technology - Multimedia content description interface - Part 4: Audio (reaffirmation of INCITS/ISO/IEC 15938-4-2002 (R2007)): 8/15/2012

INCITS/ISO/IEC 14492:2001 (R2012), Information technology - Lossy/lossless coding of bi-level images (reaffirmation of INCITS/ISO/IEC 14492:2001 (R2007)): 8/15/2012

INCITS/ISO/IEC 1989:2002/TC1:2006 (R2012), Information technology - Programming languages - COBOL - Technical Corrigendum 1 (reaffirmation of INCITS/ISO/IEC 1989-2002 (R2008)): 8/15/2012

INCITS/ISO/IEC 1989:2002/TC2:2006 (R2012), Information technology - Programming languages - COBOL - Technical Corrigendum 2 (reaffirmation of INCITS/ISO/IEC 1989-2002 (R2008)): 8/15/2012

Stabilized Maintenance

ANSI INCITS 222-1997 (S2012), Information technology - High-Performance Parallel Interface - Switch Control (HIPPI-SC) (stabilized maintenance of ANSI INCITS 222-1997 (R2007)): 8/14/2012

ANSI INCITS 296-1997 (S2012), Information technology - Single Byte Command Code Sets CONnection (SBCON) (stabilized maintenance of ANSI INCITS 296-1997 (R2007)): 8/14/2012

ANSI INCITS 300-1997 (S2012), Information technology - High-Performance Parallel Interface - Serial Specification (HIPPI-Serial) (stabilized maintenance of ANSI INCITS 300-1997 (R2007)): 8/14/2012

ANSI INCITS 356-2002 (S2012), Information technology - Fibre Channel Audio-Video (FC-AV) (stabilized maintenance of ANSI INCITS 356-2002 (R2007)): 8/14/2012

ANSI INCITS 357-2002 (S2012), Information technology - Fibre Channel Virtual Interface Architecture Mapping Protocol (FC-VI) (stabilized maintenance of ANSI INCITS 357-2002 (R2007)): 8/14/2012

NEMA (ASC C136) (National Electrical Manufacturers Association)

Reaffirmation

ANSI C136.9-2004 (R2012), Roadway and Area Lighting Equipment - Socket Support Assemblies for Metal Heads - Mechanical Interchangeability (reaffirmation of ANSI C136.9-2004): 8/14/2012

NISO (National Information Standards Organization)

New Standard

ANSI/NISO Z39.96-2012, JATS: Journal Article Tag Suite (new standard): 8/9/2012

Revision

ANSI/NISO Z39.83-1-2012, NISO Circulation Interchange - Part 1: Protocol (NCIP) (revision of ANSI/NISO Z39.83-1-2008): 8/9/2012

ANSI/NISO Z39.83-2-2012, NISO Circulation Interchange Protocol (NCIP) - Part 2: Implementation Profile 1 (revision of ANSI/NISO Z39.83-2-2008): 8/9/2012

NSF (NSF International)

Revision

* ANSI/NSF 14-2012 (i46), Plastic Piping System Components and Related Materials (revision of ANSI/NSF 14-2012): 8/6/2012

* ANSI/NSF 49-2012 (i46), Biosafety Cabinetry: Design, Construction, Performance and Field Certification (revision of ANSI/NSF 49-2011): 7/1/2012

* ANSI/NSF 60-2012 (i57), Drinking Water Treatment Chemicals - Health Effects (revision of ANSI/NSF 60-2011): 7/16/2002

* ANSI/NSF 60-2012 (i58), Drinking water treatment chemicals - Health effects (revision of ANSI/NSF 60-2012): 7/29/2012

* ANSI/NSF 173-2012 (i45), Dietary Supplements (revision of ANSI/NSF 173-2011): 8/7/2012

PMI (Project Management Institute)

Revision

* ANSI/PMI-08-003-2012, Standard for Portfolio Management - Third Edition (revision of ANSI/PMI 08-003-2008): 8/9/2012

TIA (Telecommunications Industry Association)

Addenda

ANSI/TIA 41.321-E-1 [E]-2012, Mobile Application Part (MAP) - Voice Feature Scenarios: Call Delivery (addenda to ANSI/TIA 41.321-E -2007): 8/10/2012

ANSI/TIA 41.324-E-1 [E]-2012, Mobile Application Part (MAP) - Voice Feature Scenarios: Calling Number Identification Presentation, Calling Number Identification Restriction (addenda to ANSI/TIA 41.324-E-2007): 8/13/2012

ANSI/TIA 41.328-E-1 [E]-2012, Mobile Application Part (MAP) - Voice Feature Scenarios: Mobile Access Hunting (addenda to ANSI/TIA 41.328-E-2012): 8/13/2012

ANSI/TIA 41.520-E-1 [E]-2012, Mobile Application Part (MAP) - TCAP Application Signaling Protocols (addenda to ANSI/TIA 41.520-E -2004 (R2010)): 8/8/2012

ANSI/TIA 41.540-E-1 [E]-2012, Mobile Application Part (MAP) - Operations Signaling Protocols (addenda to ANSI/TIA 41.540-E -2004 (R2010)): 8/9/2012

* ANSI/TIA 136-370-D-1 [E]-2012, TDMA Third Generation Wireless Enhanced General Packet-Data Service (EGPRS-136) (addenda to ANSI/TIA 136-370-D-2011): 8/10/2012

ANSI/TIA 568-C.0-2-2012, Generic Telecommunications Cabling for Customer Premises - Addendum 2, General Updates (addenda to ANSI/TIA 568-C.0-2009): 8/14/2012

New Standard

ANSI/TIA 41.325-E-2012, Mobile Application Part: Voice Feature Scenarios: Conference Calling (new standard): 8/10/2012

ANSI/TIA 41.326-E-2012, Mobile Application Part: Voice Feature Scenarios: Do Not Disturb (new standard): 8/13/2012

ANSI/TIA 41.327-E-2012, Mobile Application Part: Voice Feature Scenarios: Flexible Alerting (new standard): 8/13/2012

ANSI/TIA 41.328-E-2012, Mobile Application Part (MAP) - Voice Feature Scenarios: Mobile Access Hunting (new standard): 8/13/2012

ANSI/TIA 41.329-E-2012, Mobile Application Part (MAP) - Voice Feature Scenarios: Message Waiting Notification (new standard): 8/10/2012

ANSI/TIA 41.330-E-2012, Mobile Application Part (MAP) - Voice Feature Scenarios: Password Call Acceptance / Selective Call Acceptance (new standard): 8/8/2012

ANSI/TIA 41.331-E-2012, Mobile Application Part: Voice Feature Scenarios: Priority Access and Channel Assignment (PACA) (new standard): 8/8/2012

ANSI/TIA 41.333-E-2012, Mobile Application Part: Voice Feature Scenarios - Subscriber PIN Access/Subscriber PIN Intercept (new standard): 8/10/2012

ANSI/TIA 41.334-E-2012, Mobile Application Part: Voice Feature Scenarios - Voice Message Retrieval (new standard): 8/9/2012

ANSI/TIA 41.335-E-2012, Mobile Application Part (MAP) - Voice Feature Scenarios: Calling Name Presentation, Calling Name Restriction (new standard): 8/9/2012

ANSI/TIA 41.336-E-2012, Mobile Application Part (MAP) - Voice Feature Scenarios: Wireless Emergency Services (new standard): 8/9/2012

ANSI/TIA 41.350-E-2012, Mobile Application Part (MAP) - Voice Feature Scenarios: MDN-Based Validation (new standard): 8/9/2012

ANSI/TIA 41.371-E-2012, Mobile Application Part (MAP) - Broadcast Teleservice Transport Capability (new standard): 8/8/2012

ANSI/TIA 41.372-E-2012, Mobile Application Part (MAP) - Border MSC SMS Scenarios (new standard): 8/8/2012

Reaffirmation

ANSI/TIA J-STD-025-A-2003 (R2012), Lawfully Authorized Electronic Surveillance (CALEA) (reaffirmation of ANSI/TIA J-STD-025-A -2003): 8/14/2012

UL (Underwriters Laboratories, Inc.)

Reaffirmation

ANSI/UL 525-2008 (R2012), Standard for Safety for Flame Arresters (Proposal bulletin dated 05-25-12) (reaffirmation of ANSI/UL 525 -2008): 8/10/2012

Revision

ANSI/UL 676-2012, Standard for Safety for Underwater Luminaires and Submersible Junction Boxes (revision of ANSI/UL 676-2011): 8/14/2012

ANSI/UL 676-2012a, Standard for Safety for Underwater Luminaires and Submersible Junction Boxes (revision of ANSI/UL 676-2011): 8/14/2012

ANSI/UL 746A-2012, Standard for Safety for Polymeric Materials - Short Term Property Evaluations (revision of ANSI/UL 746A-2010a): 8/8/2012

ANSI/UL 746E-2012, Standard for Safety for Polymeric Materials - Industrial Laminates, Filament Wound Tubing, Vulcanized Fibre, and Materials Used in Printed-Wiring Boards (revision of ANSI/UL 746E-2010): 8/13/2012

ANSI/UL 746A-2012a, Standard for Safety for Polymeric Materials - Short Term Property Evaluations (revision of ANSI/UL 746A-2011): 8/8/2012

ANSI/UL 746E-2012a, Standard for Safety for Polymeric Materials - Industrial Laminates, Filament Wound Tubing, Vulcanized Fibre, and Materials Used in Printed-Wiring Boards (revision of ANSI/UL 746E-2010): 8/13/2012

* ANSI/UL 1678-2012, Standard for Safety for Household, Commercial, and Professional-Use Carts and Stands for Use with Audio/Video Equipment (revision of ANSI/UL 1678-2003 (R2008)): 8/10/2012

* ANSI/UL 1678-2012a, Standard for Safety for Household, Commercial, and Professional-Use Carts and Stands for Use with Audio/Video Equipment (revision of ANSI/UL 1678-2003 (R2008)): 8/10/2012

VC (ASC Z80) (The Vision Council)

Revision

ANSI Z80.11-2012, Laser Systems for Corneal Reshaping (revision of ANSI Z80.11-2007): 8/9/2012

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.

AA (ASC H35) (Aluminum Association)

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Arlington, VA 22209

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E-mail: pshafiee@aluminum.org

BSR H35.2(M)-201x, Standard Dimensional Tolerances for Aluminum Mill Products (revision of ANSI H35.2(M)-2009)

Stakeholders: Producers, distributors, and users of aluminum.

Project Need: Maintenance action.

The standard includes dimensional tolerances for aluminum mill products in metric terms.

BSR H35.2-201x, Standard Dimensional Tolerances for Aluminum Mill Products (revision of ANSI H35.2-2009)

Stakeholders: Producers, distributors, and users of aluminum.

Project Need: Maintenance action.

The standard includes dimensional tolerances for aluminum mill products that are accepted and used within the aluminum industry and by users of metal. They are the basis of the dimensional tolerances specified in U.S. government, technical societies, and other specifications of aluminum products.

BSR H35.3-1997 (R201x), Standard Designation System for Aluminum Hardeners (reaffirmation of ANSI H35.3-1997 (R2009))

Stakeholders: Suppliers to and producers of aluminum.

Project Need: Maintenance action.

Covers systems for designating aluminum hardeners used primarily for the addition of alloying or grain-refining elements, or modifiers to aluminum alloy melts.

BSR H35.4-2006 (R201x), Desigantion system for unalloyed aluminum (reaffirmation of ANSI H35.4-2006 (R2009))

Stakeholders: Producers of aluminum.

Project Need: Maintenance action.

The standard provides a system for designating unalloyed aluminum not made by a refining process and used primarily for remelting.

BSR H35.5-201x, Standard Nomenclature System for Aluminum Metal Matrix Composites (revision of ANSI H35.5-1993 (R2009))

Stakeholders: Producers and users of aluminum.

Project Need: Maintenance action.

Covers a system for designating wrought and cast aluminum metal matrix composite materials including generic temper designation.

BSR H35.1/H35.1(M)-201x, Standard Alloy and Temper Designation Systems for Aluminum (revision of ANSI H35.1/H35.1(M)-2009)

Stakeholders: Producers, distributors, and users of aluminum.

Project Need: Maintenance action.

Covers systems for designating wrought aluminum and wrought aluminum alloys, aluminum and aluminum alloys in the form of castings and foundry ingot, and tempers in which they are produced.

AAMI (Association for the Advancement of Medical Instrumentation)

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

Contact: *Hillary Woehrle*

Fax: (703) 276-0793

E-mail: HWoehrle@aami.org

BSR/AAMI SW91-201x, Classification of defects contributing to unacceptable risk in health software (new standard)

Stakeholders: Manufacturers.

Project Need: In order to gather useful data on the causes of safety-related software failures, there needs to be a common way of identifying and reporting the software defects that lead to the failures.

Creation of a common method for classifying defects in health software.

AAMI (Association for the Advancement of Medical Instrumentation)

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Contact: *Jennifer Moyer*

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E-mail: jmoyer@aami.org

BSR/AAMI/IEC 62366-2007/A1-201x, Medical devices - Application of usability engineering to medical devices, Amendment 1 (identical national adoption of IEC 62366 am1 Ed. 1.0)

Stakeholders: Manufacturers, regulators.

Project Need: This amendment will address legacy devices.

Amendment to deal with legacy devices where the user interface design is of unknown provenance.

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

Office: 2111 Wilson Boulevard
Suite 500
Arlington, VA 22201

Contact: *Daniel Abbate*

Fax: (703) 562-1942

E-mail: dabbate@ahrinet.org

BSR/AHRI Standard 110-201x, Air-Conditioning, Heating and Refrigerating Equipment Nameplate Voltages (revision of ANSI/AHRI Standard 110-2004)

Stakeholders: This standard is intended for the guidance of the industry, including manufacturers, engineers, installers, contractors, and users.

Project Need: The purpose of this standard is to establish, for air-conditioning, heating, and refrigerating equipment: definitions; voltage-rating requirements; equipment performance requirements; and conformance conditions.

This standard applies to 50-Hz and 60-Hz electrical voltage ratings and operating limits as applied to air-conditioning, heating, and refrigerating equipment; heat pumps; and electric furnaces as well as components.

ANS (American Nuclear Society)

Office: 555 North Kensington Avenue
La Grange Park, IL 60526-5592

Contact: *Patricia Schroeder*

Fax: (708) 579-8248

E-mail: pschroeder@ans.org

BSR/ANS 6.4.2-201x, Specification for Radiation Shielding Materials for Nuclear Facilities (revision of ANSI/ANS 6.4.2-2006)

Stakeholders: Architect-engineers, nuclear facilities, medical institutions, national laboratories, universities with accelerators and/or reactors, shielding material vendors.

Project Need: The standard as written applies primarily to nuclear power plants. Revision will address additional facilities (e.g., accelerators) and will incorporate new concerns (e.g., disposal/release/recycling of shielding material).

This standard sets forth requirements for supplier reporting of physical and nuclear properties as appropriate for a particular application in order to form the basis for the selection of radiation shielding materials.

BSR/ANS 8.3-201x, Criticality Accident Alarm System (revision of ANSI/ANS 8.3-1997 (R2012))

Stakeholders: Criticality safety programs nationwide, U.S. Department of Energy, and the U.S. Nuclear Regulatory Commission.

Project Need: A revision of the standard is necessary based on lessons learned from usage of the current version as well as to address N16 and public review comments received during the recent reaffirmation process. The revision will focus on make the document self-consistent and consistent with other ANSI/ANS-8 standards. The working committee intends to work the revision on a line-by-line basis.

This standard is applicable to operations with fissionable materials in which inadvertent criticality could occur leading to an excessive radiation dose to personnel. This standard is not applicable to nuclear reactors or critical experiments.

ASTM (ASTM International)

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West Conshohocken, PA 19428-2959

Contact: *Jeff Richardson*

Fax: (610) 834-7067

E-mail: jrichard@astm.org

BSR/ASTM E2449-201x, Standard Guide for Irradiation of Pre-packaged Processed Meat and Poultry Products to Control Pathogens and Other Microorganisms (new standard)

Stakeholders: Food Irradiation Industry.

Project Need: This guide outlines procedures for the irradiation of pre-packaged refrigerated and frozen processed meat and poultry products.

http://www.astm.org/Standards/E2449.htm

BSR/ASTM F1355-201x, Standard Guide for Irradiation of Fresh Agricultural Produce as a Phytosanitary Treatment (new standard)

Stakeholders: Food Irradiation Industry.

Project Need: This guide provides procedures for the radiation processing of fresh agricultural produce, for example, fruits, vegetables, and cut flowers, as a phytosanitary treatment. This guide is directed primarily toward the treatment needed to control regulated pests commonly associated with fresh agricultural produce.

http://www.astm.org/Standards/F1355.htm

ATIS (Alliance for Telecommunications Industry Solutions)

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Suite 500
Washington, DC 20005

Contact: *Kerrianne Conn*

Fax: (202) 347-7125

E-mail: kconn@atis.org

BSR ATIS 1000010.a-201x, Supplement to ATIS 1000010 (supplement to ANSI ATIS 1000010-2006 (R2011))

Stakeholders: Communications Industry.

Project Need: To provide updates to ATIS 1000010, which support the evolution of Emergency in Telecommunications Services (ETS) in IP Networks.

Provides updates to ATIS 1000010, which supports the evolution of Emergency in Telecommunications Services (ETS) in IP Networks.

BSR ATIS 1000113.a-201x, Supplement to ATIS 1000113 (supplement to ANSI ATIS 1000113-2005 (R2010))

Stakeholders: Communications Industry.

Project Need: Develops supplement to ATIS 1000113, reflecting newly assigned ISUP parameter values.

Develops a supplement to ATIS 1000113, reflecting newly assigned ISUP parameter values.

CEA (Consumer Electronics Association)

Office: 1919 S. Eads St.
Arlington, VA 22202

Contact: *Shazia McGeehan*

Fax: (703) 907-4192

E-mail: smcgeehan@ce.org

* BSR/CEA 2037-A-201x, Determination of Television Average Power Consumption (revision of ANSI/CEA 2037-2010)

Stakeholders: Consumer electronics industry.

Project Need: Revise CEA 2037.

This standard defines a method for measuring television average power consumption.

CSA (CSA Group)

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

Contact: *Cathy Rake*

Fax: (216) 520-8979

E-mail: cathy.rake@csagroup.org

* BSR Z21.10.1a-201x, Standard for Gas Water Heaters, Volume I, Storage Water Heaters with Input Ratings of 75,000 Btu Per Hour or Less (same as CSA 4.1a) (revision of ANSI Z21.10.1-2008, ANSI Z21.10.1a-2009, and ANSI Z21.10.1b-2011)

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

Project Need: Revise the standard for safety.

Details test and examination criteria for automatic storage water heaters with input ratings of 75,000 Btu per hour (21 980 W) or less for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures.

* BSR Z21.10.3-201x, Standard for Gas Water Heaters, Volume III, Storage, with Input Ratings Above 75,000 Btu Per Hour, Circulating and Instantaneous Water Heaters (same as CSA 4.3) (revision of ANSI Z21.10.3-2011)

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

Project Need: Revise the standard for safety.

Details test and examination criteria for automatic storage, with input ratings above 75,000 Btu per hour (21 980 W), circulating and instantaneous water heaters for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures.

* BSR Z21.13a-201x, Standard for Gas-Fired Low Pressure Steam and Hot Water Boilers (same as CSA 4.9a) (revision of ANSI Z21.13 -2009, ANSI Z21.13a-2010, and ANSI Z21.13b-2012)

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

Project Need: Revise the standard for safety.

Details test and examination criteria for Category I, Category II, Category III, and Category IV low-pressure steam and hot-water boilers for use with natural, manufactured and mixed gases, liquefied petroleum gases and LP gas-air mixtures. A boiler is defined as operating at or below the following pressures or temperatures:
- steam heating boiler: 15 psi (103.42 kPa) steam pressure;
- hot water heating or supply boiler: 160 psi (1.10 MPa) water pressure, 250 F (121 C) water temperature.

* BSR Z21.56b-201x, Standard for Gas-Fired Pool Heaters (same as CSA 4.7b-201x) (revision of ANSI Z21.56-2005 (R2012) Add A & Add B)

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

Project Need: Revise the standard for safety.

Details test and examination criteria for pool heaters for use with natural, manufactured, and mixed gases; liquefied petroleum gases; and LP gas-air mixtures. Pool heaters are designed to heat non-potable water stored at atmospheric pressure, such as water in swimming pools, spas, hot tubs, and similar applications.

ECA (Electronic Components Association)

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Herndon, VA 20170

Contact: *Edward Mikoski*

Fax: (571) 323-0245

E-mail: emikoski@eciaonline.org

BSR/EIA 198-3-10-201x, Multilayer (Monolithic), Unencapsulated, Ceramic Dielectric, Surface-Mount Low Inductance Chip Capacitors and Multi-Terminal Low Inductance Capacitors (new standard)

Stakeholders: Consumer, telecom/datacom, automotive.

Project Need: Addresses the specifications and characteristics of low-inductance geometry in MLCCs.

These fixed value capacitors are designed for surface mount circuit applications. They are lower inductance, unencapsulated, ceramic dielectric, multilayer chip capacitors with solderable end terminations. Primarily for high-frequency applications

FCI (Fluid Controls Institute)

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Cleveland, OH 44115

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BSR/FCI 99-2-201x, Pressure Reducing Regulator Capacity (revision of ANSI/FCI 99-2-2004)

Stakeholders: Manufacturers of pressure regulators.

Project Need: To provide a test methodology for measuring and reporting the capacity of pilot-operated and direct-acting pressure-reducing regulators.

To provide a test methodology for measuring and reporting the capacity of pilot-operated and direct-acting pressure-reducing regulators.

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

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

Contact: *Barbara Bennett*

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E-mail: bbennett@itic.org

INCITS/ISO/IEC 29136-201x, Information technology - User interfaces - Accessibility of personal computer hardware (identical national adoption of ISO/IEC 29136:2012)

Stakeholders: ICT Industry.

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

ISO/IEC 29136:2012 provides requirements and recommendations for the accessibility of personal computer hardware, to be used when planning, developing, designing and distributing these computers. While it does not cover the behavior of, or requirements for, assistive technologies, it does address connectivity of assistive technologies as an integrated component of interactive systems. Some requirements or recommendations in ISO/IEC 29136:2012 require software support; however, requirements and recommendations that solely focus on software are not included in ISO/IEC 29136:2012.

NEMA (ASC C8) (National Electrical Manufacturers Association)

Office: 1300 North 17th Street, Suite 1752
Rosslyn, VA 22209

Contact: *Ryan Franks*

Fax: 703-841-3371

E-mail: ryan.franks@nema.org

BSR/ICEA S-104-696-201x, Standard for Indoor-Outdoor Optical Fiber Cable (new standard)

Stakeholders: Individuals and organizations involved in the fiber optic cable industry.

Project Need: The standard has reached the end of its 10-year life.

Indoor-outdoor optical fiber cables covered by this Standard are generally derived from outdoor cable designs having the thermal and mechanical robustness that makes them suitable for use in the Outside Plant. Material changes are made, as required, to allow the designs to meet their intended fire rating. These optical fiber cables can be expected to comply with all specification requirements stipulated in this Standard.

NSF (NSF International)

Office: 789 N. Dixboro Road
Ann Arbor, MI 48104

Contact: *Maureen Sertich*

Fax: 734-827-7875

E-mail: msertich@nsf.org

BSR/NSF 416-201x, Sustainability Assessment for Water and Wastewater Chemicals (new standard)

Stakeholders: Water and wastewater chemical manufacturers, distributors and purchasers.

Project Need: Provide a method to assess sustainable attributes of water and wastewater chemicals through quantifiable metrics that demonstrate compliance with levels of achievement.

Establishes performance criteria, based on Life Cycle Assessment (LCA) principles, which enable water and wastewater chemical manufacturers to demonstrate the sustainable attributes of their products. This voluntary standard will act as a benchmark for continuous improvement by emphasizing the environmental and sustainable impacts of water and wastewater chemicals.

SCTE (Society of Cable Telecommunications Engineers)

Office: 140 Philips Rd.
Exton, PA 19341

Contact: *Travis Murdock*

Fax: (610) 363-5898

E-mail: tmurdock@scte.org

BSR/SCTE 24-22-201x, iLBCv2.0 Speech Codec Specification for Voice over IP Applications in Cable Telephony (revision of ANSI/SCTE 24-22-2007)

Stakeholders: Cable Telecommunications Industry.

Project Need: Update to current technology.

This document contains the description of an algorithm for coding of speech signals sampled at 8 kHz. Some of the applications for which this coder is suitable are real-time communications such as telephony and videoconferencing, streaming audio, archival, and messaging.

BSR/SCTE DVS 976-1-201x, MPEG-4 HE-AAC - Part 1: MPEG-4 Coding Constraints for Cable Television (new standard)

Stakeholders: Cable Telecommunications Industry.

Project Need: Create new standard.

This document defines the coding constraints on MPEG-4 HE Advanced Audio Codec v2 audio compression for cable television.

BSR/SCTE DVS 976-2-201x, MPEG-4 HE-AAC - Part 2: MPEG-4 Transport Specification for Cable Television (new standard)

Stakeholders: Cable Telecommunications Industry.

Project Need: Create new standard.

This document describes the carriage of MPEG-4 HE AAC v2, MPEG-4 HE AAC and MPEG-4 AAC audio in MPEG-2 Transport Streams for cable television.

BSR/SCTE DVS 1094-1-201x, DTS-HD Audio System - Part 1: MPEG -2 Coding Constraints for Cable Television (new standard)

Stakeholders: Cable Telecommunications Industry.

Project Need: Create new standard.

This document describes the normative reference and coding constraints of the DTS-HD audio system.

BSR/SCTE DVS 1094-2-201x, DTS-HD Audio System - Part 2: MPEG -2 Transport Specification for Cable Television (new standard)

Stakeholders: Cable Telecommunications Industry.

Project Need: Create new standard.

This document describes the carriage of DTS-HD audio in MPEG-2 systems. The descriptors necessary to signal DTS-HD audio are defined in this document.

UL (Underwriters Laboratories, Inc.)

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Research Triangle Park, NC 27709-3995

Contact: *Valara Davis*

Fax: (919) 549-0921

E-mail: Valara.Davis@ul.com

BSR/UL 4248-18-201x, Standard for Safety for Fuseholders - Part 18: Photovoltaic (new standard)

Stakeholders: Manufacturers and users of photovoltaic fuseholders.

Project Need: To attain a national-based standard covering the construction and operation of photovoltaic fuseholders.

These requirements cover fuseholders intended for use with photovoltaic fuses.

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.

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Fax: (703) 276-0793
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AGA (ASC Z223)
American Gas Association

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AGMA
American Gear Manufacturers Association

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Alexandria, VA 22314
Phone: (703) 684-0211
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Web: www.agma.org

AHRI
Air-Conditioning, Heating, and Refrigeration Institute

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Fax: (703) 562-1942
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ANS
American Nuclear Society

555 North Kensington Avenue
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Web: www.ans.org

APA
APA - The Engineered Wood Association

7011 South 19th Street
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Phone: (253) 620-7467
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Web: www.apawood.org

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

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Atlanta, GA 30329
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Fax: (404) 321-5478
Web: www.ashrae.org

ASME
American Society of Mechanical Engineers

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New York, NY 10016
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Fax: (212) 591-8501
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ASQ (ASC Z1)
American Society for Quality

600 N Plankinton Ave
Milwaukee, WI 53201
Phone: (414) 272-8575
Fax: (414) 272-1734
Web: www.asq.org

ASSE (Organization)
American Society of Sanitary Engineering

901 Canterbury Road, Suite A
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Fax: (440) 835-3488
Web: www.asse-plumbing.org

ASSE (Safety)
American Society of Safety Engineers

1800 East Oakton Street
Des Plaines, IL 60018-2187
Phone: (847) 768-3411
Fax: (847) 296-9221
Web: www.asse.org

ASTM
ASTM International

100 Barr Harbor Drive
West Conshohocken, PA 19428-2959
Phone: (610) 832-9696
Fax: (610) 834-7067
Web: www.astm.org

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

AWWA
American Water Works Association

6666 W. Quincy Ave.
Denver, CO 80235
Phone: (303) 347-6178
Fax: (303) 795-6303
Web: www.awwa.org

CEA
Consumer Electronics Association

1919 S. Eads St.
Arlington, VA 22202
Phone: (703) 907-7697
Fax: (703) 907-4192
Web: www.ce.org

CSA
CSA Group

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

ECA
Electronic Components Association

2214 Rock Hill Rd, Suite 170
Herndon, VA 20170
Phone: (571) 323-0253
Fax: (571) 323-0245
Web: www.eciaonline.org

FCI
Fluid Controls Institute

1300 Sumner Avenue
Cleveland, OH 44115
Phone: (216) 241-7333
Fax: (216) 241-0105
Web: www.fluidcontrolsinstitute.org

FM
FM Approvals

1151 Boston-Providence Turnpike
Norwood, MA 2062
Phone: (781) 255-4813
Fax: (781) 762-9375
Web: www.fmglobal.com

IEEE
Institute of Electrical and Electronics Engineers (IEEE)

445 Hoes Lane
Piscataway, NJ 08854
Phone: (732) 562-3854
Fax: (732) 796-6966
Web: www.ieee.org

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

NEMA (ASC C29)
National Electrical Manufacturers Association

1300 North 17th Street, Suite 1752
Rosslyn, VA 22209
Phone: 703-841-3297
Fax: 703-841-3397
Web: www.nema.org

NEMA (ASC C8)
National Electrical Manufacturers Association

1300 North 17th Street, Suite 1752
Rosslyn, VA 22209
Phone: 703-841-3271
Fax: 703-841-3371
Web: www.nema.org

NEMA (Canvass)
National Electrical Manufacturers Association

1300 North 17th Street, Suite 1752
Rosslyn, VA 22209
Phone: (703) 841-3285
Fax: (703) 841-3385
Web: www.nema.org

NISO
National Information Standards Organization

One North Charles Street, Suite 1905
Baltimore, MD 21201
Phone: (301) 654-2512
Fax: (410) 685-5278
Web: www.niso.org

NPES (ASC CGATS)
NPES

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

NSF
NSF International

789 N. Dixboro Road
Ann Arbor, MI 48105
Phone: (734) 769-5159
Fax: (734) 827-6176
Web: www.nsf.org

PLASA
PLASA North America

630 Ninth Avenue, Suite 609
New York, NY 10036-3748
Phone: (212) 244-1505
Fax: (212) 244-1502
Web: www.plasa.org

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

SCTE
Society of Cable Telecommunications Engineers

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

TAPPI
Technical Association of the Pulp and Paper Industry

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

TIA
Telecommunications Industry Association

2500 Wilson Boulevard, Suite 300
Arlington, VA 22201
Phone: (703) 907-7497
Fax: (703) 907-7727
Web: www.tiaonline.org

UL
Underwriters Laboratories, Inc.

455 E Trimble Road
San Jose, CA 95131-1230
Phone: (408) 754-6722
Fax: (408) 754-6722
Web: www.ul.com/

VC (ASC Z80)
The Vision Council

225 Reinekers Lane, Suite 700
Alexandria, VA 22314
Phone: (703) 740-1094
Fax: (703) 548-4580
Web: www.thevisioncouncil.org

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 email from standards@scte.org.

ANSI Accredited Standards Developers

Approvals of Reaccreditation

ASC OP – Optics and Electro-Optical Instruments

ANSI's Executive Standards Council has approved the reaccreditation of Accredited Standards Committee OP, Optics and Electro-Optical Instruments under its recently revised operating procedures for documenting consensus on ASC OP-sponsored American National Standards, effective August 14, 2012. For additional information, please contact the Secretariat of ASC OP: Mr. Dave Aikens, Executive Director and Secretary, Optics and Electro-Optics Standards Council, 35 Gilbert Hill Road, Chester, CT 06412; phone: 860.878.0722; E-mail: daikens@savvyoptics.com.

IAPMO

ANSI's Executive Standards Council has approved the reaccreditation of IAPMO, an ANSI Organizational Member, under its recently revised operating procedures for documenting consensus on IAPMO-sponsored American National Standards, effective August 9, 2012. The current versions of IAPMO's separately accredited procedures for its Uniform Plumbing and Mechanical; Solar; and Swimming Pool Code committees remain in effect. For additional information, please contact: Mr. Abraham Murra, P.Eng., Director of Standards Development, IAPMO Research and Testing, Inc., 5001 East Philadelphia Street, Ontairo, CA 91761; phone: 909.472.4106; E-mail: abraham.murra@iapmort.org.

Transfer of Secretariats

ASC Z9 – Health and Safety Standards for Ventilation Systems; ASC Z10 – Occupational Health and Safety Systems; ASC Z88 – Respiratory Protection

In accordance with the requirements set forth in Annex A, Change in Secretariat-Consensus Body Relationship within an ANSI-Accredited Standards Committee (ASC) of the Operating Procedures of the ANSI Executive Standards Council, the American Industrial Hygiene Association (AIHA), in its role as the Secretariat of ASC Z9, Health and Safety Standards for Ventilation Systems; ASC Z10, Occupational Health and Safety Systems; and ASC Z88, Respiratory Protection has formally advised ANSI that it is relinquishing its responsibility as the Secretariat of these ASCs, and that the ASCs have voted to transfer the maintenance of their sponsored American National Standards to the American Society of Safety Engineers (ASSE). The ASCs will continue to operate under their currently accredited operating procedures. These actions will take effect on October 1, 2012. Please forward any comments by September 17, 2012 to Mr. David Hicks, Sr. Manager, American Industrial Hygiene Association, 3141 Fairview Park Drive, Falls Church, VA 22042; phone: 703.846.0720; E-mail: dhicks@aiha.org (please copy psa@ansi.org).

ANSI Accreditation Program for Third Party Product Certification Agencies

Application for Accreditation

NSF International

Comment Deadline: September 17, 2012

Applicant:

Mr. Craig Morr, Director, Quality
NSF International
789 Dixboro Road
Ann Arbor, MI 48105
Phone: 734-769-8010
Fax: 734-769-0109
E-mail: cmorr@nsf.org

NSF International has submitted an application for ANSI accreditation to include the following:

BIFMA level™ Certification Program for ANSI/BIFMA e3-2011 Furniture Sustainability Standard

Please send your comments by September 17, 2012 to Reinaldo Figueiredo, Senior Program Director, Product Certification Accreditation, American National Standards Institute, 1899 L Street, NW, 11th Floor, Washington, DC 20036.

You may also send your comments via fax (202-293 9287) or by e-mail to Reinaldo Figueiredo (rfigueir@ansi.org) or to Nikki Jackson, Program Manager (njackson@ansi.org).

ANSI Accreditation Program for Greenhouse Gas Verification/Validation Bodies

Application for Accreditation

Internat Energy Solutions Canada, Inc.

Comment Deadline: September 17, 2012

In accordance with the following ISO standards:

ISO 14065:2007, Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition

Internat Energy Solutions Canada, Inc.
403-425 Adelaide St W.
Toronto, ON
M5V 3C1, Canada

has submitted a formal application for accreditation by ANSI for the following Sector Groups:

Verification of assertions related to GHG emission reductions & removals at the organizational level

01. General

02. Manufacturing

03. Power Generation

Please send your comments by September 17, 2012 to Ann Bowles, Director, Environmental Accreditation Programs, American National Standards Institute, 1899 L Street, NW,11th Floor, Washington, DC 20036, Fax: 202-293-9287 or e-mail: abowles@ansi.org.

International Organization for Standardization (ISO)

ISO Proposals for a New Fields of ISO Technical Activity

Biotechnology

Comment Deadline: September 21, 2012

DIN (Germany) has submitted to ISO the attached proposal for a new field of technical activity on Biotechnology with the following scope statement:

Standardization in the field of Biotechnology seeks internationally recognized and accepted terms and definitions, analytical and diagnostic methods, computing tools and technology for international comparability and integratability of data. The new committee would not seek to standardize academic or SME research, but would instead encourage experts of these groups to actively participate in the standardization of biotechnological products, techniques and processes.

The proposed Technical Committee would hence also be responsible for the timely incorporation of innovative ideas into the standardization works of this field.

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, September 21, 2012.

Sludge Recovery, Recycling, Treatment, and Disposal

Comment Deadline: September 21, 2012

AFNOR (France) has submitted to ISO the attached proposal for a new field of technical activity on Sludge recovery, recycling, treatment and disposal with the following scope statement:

Standardization of the methods for characterizing, categorizing, preparing, treating, recycling and managing sludge and products from urban wastewater collection systems, night soil, storm water handling, water supply treatment plants, wastewater treatment plants for urban and similar industrial waters. It includes all sludge that may have similar environmental and/or health impacts.

Standardization of measurement methods for characterizing and categorizing encompasses: sampling methods, physical, chemical and microbiological parameters analysis, preparation of sludge, physical behavior of sludge, all required for the characterization of sludge with a view to facilitate decisions on the choice of treatment procedures and of the use and disposal of sludge.

Excluded: hazardous sludge from industry and dredged sludge already covered by ISO/TC 190 "Soil Quality".

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, September 21, 2012.

ISO Proposal for a New ISO IWA

Multiple Resource Productivity

Comment Deadline: August 17, 2012

Israel (SII) has submitted to ISO Technical Management Board (ISO/TMB) the attached proposal for a new ISO International Workshop Agreement (IWA) on Multiple Resource Productivity, with the following summary scope/rationale statement:

> Recently, in scientific and other forums, it is more and more spoken of the nexus between energy, food and water, and the need to develop assessment and analysis tools that will enable economic comparison for various infrastructure projects, create an order of priorities for governments, operational agencies and policy makers. These tools will facilitate companies and other financial institutions to adapt their products and services (including projects) accordingly, as well as to offer their products and services, gaining a competitive advantage. The proposed MRP Draft attached, presents a multi-dimensional analysis seeking to verify the contribution or utilization of each relevant resource. The aim is to develop a framework standard draft for MRP that will include but not be limited to the Water-Energy-Food / Land resources junction, models and optimization, and technologies and processes for evaluating an infrastructural project.

Anyone wishing to review the proposal for a new IWA 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, August 17, 2012.

Meeting Notice

The Repair of Laminated Auto Glass (ROLAGS) Standards Committee Meeting

The ROLAGS Committee will meet on Thursday, September 20, 2012, from 9:00 AM to 11:00 AM, during Auto Glass Week in the Jockey Room at the Louisville Marriott Downtown in Louisville, Kentucky. For reservations or for more information, please contact Deb Levy, secretariat of the meeting, at deb@glass.com.

Information Concerning

International Organization for Standardization (ISO)

Call for International (ISO) Secretariat

ISO/TC 28 – *Petroleum products and lubricants*
ISO/TC 28/SC 7 – *Liquid biofuels*

ANSI has delegated the responsibility for the administration of the secretariats for ISO/TC 28 (Petroleum products and lubricants) and ISO/TC 28/SC 7 (Liquid biofuels) to ASTM International. ASTM International has advised ANSI of its intent to relinquish its role as delegated secretariat for both of the aforementioned ISO committees.

ISO/TC 28 operates under the following scope:

> Standardization of terminology, classification, specifications, methods of sampling, measurement, analysis and testing for:

- Petroleum;
- Petroleum products;
- Petroleum based lubricants and hydraulic fluids;
- Non-petroleum based liquid fuels;
- Non-petroleum based lubricants and hydraulic fluids.

ANSI is seeking organizations in the U.S. that may be interested in assuming the delegated responsibility for the administration of the secretariats for ISO/TC 28 and/or ISO/TC 28/SC 7.

Additionally, ANSI may be assigned the responsibility for administering an ISO secretariat. Any request that ANSI accept a secretariat shall demonstrate that:
1. the affected interests have made a financial commitment for not less than three years, covering all defined costs incurred by ANSI associated with holding the secretariat;
2. the affected technical sector, organizations or companies desiring that the U.S. hold the secretariat request that ANSI perform this function;
3. the relevant US TAG has been consulted with regard to ANSI's potential role as secretariat; and
4. ANSI is able to fulfill the requirements of a secretariat.

Organizations seeking information concerning the United States retaining the role of international secretariat may be obtained by contacting ANSI at isot@ansi.org by September 1, 2012. If there is no support for retaining the ISO/TC 28 secretariat and/or the ISO/TC 28/SC 7 secretariat in the United States, then ANSI will so advise the ISO Central Secretariat.

Information Concerning

ANSI Accredited Standards Developers

Application for Accreditation

NENA – The National Emergency Number Association (The 9-1-1 Association)

Comment Deadline: September 17, 2012

NENA - the **National Emergency Number Association (The 9-1-1 Association)**, a new ANSI Organizational Member, has submitted an application for accreditation as an ANSI Accredited Standards Developer (ASD) and proposed operating procedures for documenting consensus on NENA-sponsored American National Standards. NENA's proposed scope of standards activity is as follows:

The National Emergency Number Association (NENA) develops requirements, standards, specifications, recommended procedures, and information documents through the NENA Development Group (NDG) and its related committees and working groups. NENA also sponsors interoperability verification testing. This work supports 9-1-1 emergency call routing and data management. 9-1-1 service systems are comprised of transport networks, hardware, software, data, and, personnel, and operational policies and procedures that:

A. enable processing of emergency calls from originating services including but not limited to providers of voice telephony, text messaging, data transmission, and multimedia transmission or streaming;

B. provide standardized interfaces to originating service providers and/or network providers to support emergency communications; acquire and integrate emergency call data (including but not limited to caller location) useful to call routing and handling;

C. deliver emergency calls, video, and data to the appropriate public safety answering point and/or other appropriate emergency entities; and

D. answer, process, and support emergency calls.

Parts of NENA's development work concern standards, procedures, and practices for the management of databases which control software functions, procedures for overall system management, and guidelines for the maintenance and evolution of systems intended to ensure emergency service quality and consistency.

NENA's interest in ANSI accreditation is specific to 9-1-1 service systems and their design, deployment, maintenance, operation, and upgrade. NENA's ANSI standards scope starts at the point an originating service provider interfaces to the 9-1-1 system, encompasses the above areas, and ends at the point where the call, message, and/or data has been interpreted and processed by public safety call taking functions, and/or interconnected to other emergency entities (such as trauma centers, hospitals, sensor monitoring centers, etc.).

To obtain a copy of NENA's proposed operating procedures, or to offer comments, please contact: Mr. Roger Hixson, ENP, Technical Issues Director, National Emergency Number Association, 1700 Diagonal Road, Suite 500, Alexandria, VA 22314; phone: 202.618.4405; E-mail: rhixson@nena.org. Please submit your comments to NENA by **September 17, 2012**, with a copy to the Recording Secretary, ExSC in ANSI's New York Office (FAX: 212.840.2298; E-mail: Jthompso@ANSI.org). As the proposed procedures are available electronically, the public review period is **30 days**. You may view or download a copy of NENA's proposed operating procedures from *ANSI Online during the public review period* at the following URL: http://publicaa.ansi.org/sites/apdl/Documents/Forms/AllItems.aspx?RootFolder=%2fsites%2fapdl%2fDocuments%2fStandards%20Activities%2fPublic%20Review%20and%20Comment%2fANS%20Accreditation%20Actions&View=%7b21C60355%2dAB17%2d4CD7%2dA090%2dBABEEC5D7C60%7d.

ANNOUNCEMENT OF GROUP FORMATION:

United States Space Universal MOdular "SUMO" architecture - Special Interest Group (SUMO-SIG)

AUGUST 9, 2012

In response to public and private sector incentives to decrease the costs of satellite design and integration and to establish spacecraft modularity to improve interoperability, adaptability and agility, a "Space Universal MOdular architecture – Special Interest Group (SUMO-SIG)" is being established within the framework of the US Technical Advisory Group to ISO Technical Committee 20, Subcommittee 13 (ISO/TC20/SC13), Space Data and Information Transfer Systems. The Terms Of Reference for the group are attached.

This group will evaluate candidate architectural frameworks for standardized spacecraft avionics and will examine:
- Common areas where architectures and frameworks are the same
- Differing areas and subsequent assessment of which set is better
- Gap areas – where there is a lack of definition and further development is needed

The SIG will assess a range of standards and architectures, including: Integrated Modular Avionics (IMA); U.S. Air Force Research Lab's (AFRL) proposed Space Plug and Play Architecture (SPA) standards and their related **M**odular **O**pen **N**etwork **Archi**tecture (MONARCH); the European Space Agency's **S**pace **A**vionics **O**pen **I**nterface a**R**chitecture (SAVOIR); and protocols for onboard data exchange. The goal is to identify the common features for interoperability and identify where a common set of standards would be beneficial to the space community.

There is a strong market need for the development of international technical consensus for standards that addresses future spacecraft avionics architectures. The desired outcome is sufficient U.S. consensus to request the formation of a multinational study group within the Consultative Committee for Space Data Systems (CCSDS), which could lead to the development of an international CCSDS Recommended Standard and its subsequent advancement to ISO.

Participation in the SUMO-SIG is open to qualified representatives of U.S. government, industry and academia who have a bona-fide interest in the subject matter. It is planned that the SUMO-SIG will meet during summer 2012 via a web-based teleconference to discuss the formulation of a technical position. Interested U.S. parties who wish to participate in the SIG are invited to submit their names, affiliation, and professional interest and contact information to the US-SUMO-SIG convener:

Karen Jones:
karen.l.jones@aero.org
703-275-2902

UNITED STATES TECHNICAL ADVISORY GROUP
TO ISO TECHNICAL COMMITTEE 20,
SUBCOMMITTEE 13, "SPACE DATA AND INFORMATION TRANSFER SYSTEMS"

https://www.aiaa.org/Secondary.aspx?id=6920&terms=TAG13

TERMS OF REFERENCE:

US Space Universal Modular architecture - Special Interest Group (SUMO-SIG)

09 AUGUST, 2012

Considering that

1. A unified and internationally standardized open architecture for space vehicle components which will stimulate international competitiveness of space component and payload manufacturers across the global space community by providing a "level playing field" on which internationally-interoperable products can be based.
2. There is a strong international desire to eliminate proprietary and regional standards that introduce market barriers which undermine trade.
3. There is significant economic and strategic motivation among satellite component manufacturers to reduce non recurring engineering (NRE) expenses. By establishing an internationally standardized modular architecture for space vehicle components satellite component manufacturers would reduce duplicative design, testing and certification procedures could allow for more time and capital to focus on design and performance improvements
4. A goal of the ***US National Space Policy – 2011*** is to "promote a robust domestic commercial space industry" and "foster fair and open global trade and commerce through the promotion of suitable standards and regulations that have been developed with input from U.S. industry".

And recognizing that

1. Satellite integrators, primes, component, subsystem and payload manufacturers must be involved in the international standards development process. Participation should include space companies doing business in the global space marketplace.
2. It is imperative to forge international agreement on the best architecture among the various standard-based architectures that are currently being developed. A first and vital step in securing such an international agreement is to assemble a technical consensus across the US space community.

A US Space Universal MOdular architecture Special Interest Group (US-SUMO-SIG) is established within the framework of the US Technical Advisory Group to ISO/TC20/SC13 to:

1. Develop a consensus US technical position concerning the desirability of developing a standardized modular architecture for space vehicle avionics that blends the best parts of current standards and any other approaches that may be proposed during the SIG process.
2. Build that consensus by consulting and involving leading technical experts from the US satellite community, including the DoD, NASA, other space faring US government organizations and commercial providers.
3. Meet as necessary (face-face and/or virtually) to develop an agreed US technical position relative to the requirements for an internationally-standardized spacecraft avionics architecture. The group will initially focus on defining the problem and the desired characteristics of a preferred solution, rather than advancing any particular concrete implementation.
4. Advance the consensus US proposal to the Consultative Committee for Space Data Systems (CCSDS) in the form of a request for international participation on a CCSDS Birds of a Feather group (BOF), with a view towards chartering a CCSDS Working Group to create the necessary international standard(s) that would then be advanced to ISO.

BSR/ASHRAE/IES Addendum AC
to ANSI/ASHRAE/IES Standard 90.1-2010

Public Review Draft

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

Second Public Review (August 2012)
(Draft shows Proposed Changes to Current Standard)

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

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, www.ashrae.org.

The appearance of any technical data or editorial material in this public review document does not constitute endorsement, warranty, or guaranty by ASHRAE of any product, service, process, procedure, or design, and ASHRAE expressly disclaims such.

ASHRAE, 1791 Tullie Circle, NE, Atlanta GA 30329-2305

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

FOREWORD

Text modifications:

The modifications to the text intend to clarify when the airspace R-values can be used. The criterion was taken from the original research (Housing Research Paper No. 32) which was the source of the HoF table.

Table modifications-

Table A9.4A--A significant difference in effective R-values exists for floor and ceilings with reflective materials and air spaces in different climate zones. These values currently assume that buildings are only heated and are not properly quantified in the current version of the code. The performance of a horizontal (floor/attic applications) airspace varies significantly based on the direction of the heat flow and currently only assumes a mean temperature of 75F with heat moving out of the building. The revised table uses the reflective values in the ASHRAE HoF (50-30 for both winter and summer conditions) and weights the value for each climate zone based on the HDD and CDD for the ASHRAE 90.1 representative city in that zone. Effective emittance levels of 0.03 have been removed because of concerns related to the durability and repeatability of this level of thermal performance.

Table A9.4B- Two of the values did not translate when applying the effective emissivity formula. Also, the Aluminum Foil with condensate categories were removed – not considered useful for code compliance.

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 AC to 90.1-2010

Modify the Standard As Follows:

A9.4 Calculation Procedures and Assumptions. *The following procedures and assumptions shall be used for all calculations. R-values for air films, airspaces, insulation, and building materials shall be taken from Sections A9.4.1 through A9.4.36, respectively. In addition, the appropriate assumptions listed in Sections A2 through A8, including framing factors, shall be used.*

…

A9.4.1.3 *Interior surfaces are surfaces within enclosed spaces. The R-value for cavity airspaces shall be taken from Table A9.4A based on the emissivity of the cavity from Table A9.4B. No credit shall be given for airspaces in cavities that are less than 0.5 in. The values for 3.5 in. cavities shall be used for cavities of that width and greater.*

A9.4.2 Airspaces. *The R-value for airspaces shall be taken from Table A9.4A based on the effective emittance of the surfaces facing the airspace from Table A9.4B provided the following criteria are satisfied:*

a) *Airflow into and out of the airspace is minimized. Airflow shall be deemed minimized when the materials bounding the airspace are within the continuous air barrier and separated from the conditioned space.*
b) *Non-parallel spaces shall use the shortest distance to determine the depth of the airspace.*
c) *Airspaces less than 0.5 in. (13 mm) depth shall have no R-value.*
d) *The R-value for 3.5 in. (89 mm) airspaces shall be used for airspaces of that width or greater provided that that airspace does not exceed 12 in. (300 mm) between the surfaces at any point.*

For material emissivity properties not listed in Table A9.4B, Equation A9.4.2 shall be permitted to calculate the effective emissivity for the airspace.

$1/e_{eff} = 1/e_1 + 1/e_2 - 1$ (A9.4.2)

Where:
e_{eff} = effective emittance for the airspace
e_1= surface 1 emittance
e_2= surface 2 emittance

Renumber subsequent sections…

Table A9.4B

	Emittance	Effective Emittance e and 0.9	Both e	
Aluminum Foil Bright	*0.05*	*0.05*	*0.03*[a]	
Aluminum Foil w/ little condensate	*0.3*	*0.29*	*0.18*	
Aluminum Foil w/ lot condensate	*0.7*	*0.65*	*0.54*	
Aluminum Sheet	*0.12*	*0.12*	*0.06*	
Aluminum paper, polished	*0.20*	*0.20*	*0.11*	
Steel-galvanized	*0.25*	*0.24*	*0.14*	*0.15*
Aluminum Paint	*0.50*	*0.47*	*0.32*	*0.35*
Building Materials	*0.90*	*0.82*	*0.82*	
Glass	*0.84*	*0.77*	*0.72*	

[a]*When referencing Table A9.4A, use an effective emittance of 0.05*

Table A9.4A

Airspace Component	***Thickness, in.***	***R-Value Effective Emissivity 0.03***	***0.05***	***0.20***	***0.50***	***0.82***
	0.50	*2.13*	*2.04*	*1.54*	*1.04*	*0.77*
	0.75	*2.33*	*2.22*	*1.64*	*1.09*	*0.80*
Roof						
	1.50	*2.53*	*2.41*	*1.75*	*1.13*	*0.82*
	3.50	*2.83*	*2.66*	*1.88*	*1.19*	*0.85*
	0.50	*2.54*	*2.43*	*1.75*	*1.13*	*0.82*
	0.75	*3.58*	*3.32*	*2.18*	*1.30*	*0.90*
Wall						
	1.50	*3.92*	*3.62*	*2.30*	*1.34*	*0.93*
	3.50	*3.67*	*3.40*	*2.21*	*1.31*	*0.91*
	0.50	*2.55*	*1.28*	*1.00*	*0.69*	*0.53*
	0.75	*1.44*	*1.38*	*1.06*	*0.73*	*0.54*
Floor						
	1.50	*2.49*	*2.38*	*1.76*	*1.15*	*0.85*
	3.50	*3.08*	*2.90*	*2.01*	*1.26*	*0.90*

TABLE A9.4A Annual Mean R-Value for Cavity Air Spaces

		Climate Zone 1				Climate Zone 2				Climate Zone 3				Climate Zone 4			
	Airspace	Effective Emittance				Effective Emittance				Effective Emittance				Effective Emittance			
Component	Thickness (in)	0.05	0.20	0.50	0.82	0.05	0.20	0.50	0.82	0.05	0.20	0.50	0.82	0.05	0.20	0.50	0.82
Roof	0.50	2.5	1.9	1.2	0.9	2.4	1.8	1.2	0.9	2.2	1.7	1.1	0.9	2.0	1.6	1.1	0.8
	0.75	3.5	2.4	1.4	1.0	3.2	2.2	1.4	1.0	2.8	2.0	1.3	0.9	2.5	1.8	1.2	0.9
	1.50	5.6	3.1	1.7	1.1	4.9	2.9	1.6	1.1	4.2	2.5	1.5	1.0	3.5	2.2	1.3	0.9
	3.50	8.0	3.8	1.9	1.2	7.0	3.4	1.7	1.1	5.9	3.0	1.6	1.1	4.7	2.6	1.4	1.0
Wall	0.50	2.5	1.8	1.2	0.9	2.5	1.8	1.2	0.9	2.5	1.8	1.2	0.9	2.5	1.8	1.2	0.9
	0.75	2.8	2.0	1.3	0.9	2.8	2.0	1.3	0.9	2.8	2.0	1.3	0.9	2.8	2.0	1.3	0.9
	1.50	2.5	1.8	1.2	0.9	2.5	1.8	1.2	0.9	2.5	1.8	1.2	0.9	2.5	1.8	1.2	0.9
	3.50	2.6	1.9	1.3	0.9	2.6	1.9	1.3	0.9	2.6	1.9	1.3	0.9	2.6	1.9	1.3	0.9
Floor	0.50	1.6	1.3	1.0	0.8	1.8	1.4	1.0	0.8	1.9	1.5	1.1	0.8	2.1	1.6	1.1	0.8
	0.75	1.7	1.4	1.0	0.8	2.0	1.5	1.1	0.8	2.4	1.7	1.2	0.9	2.7	1.9	1.2	0.9
	1.50	1.9	1.5	1.1	0.8	2.5	1.8	1.2	0.9	3.2	2.1	1.3	0.9	3.9	2.4	1.4	1.0
	3.50	2.1	1.6	1.1	0.8	3.2	2.0	1.2	0.9	4.3	2.4	1.4	1.0	5.5	2.9	1.5	1.1

		Climate Zone 5				Climate Zone 6				Climate Zone 7				Climate Zone 8			
	Airspace	Effective Emittance				Effective Emittance				Effective Emittance				Effective Emittance			
Component	Thickness (in)	0.05	0.20	0.50	0.82	0.05	0.20	0.50	0.82	0.05	0.20	0.50	0.82	0.05	0.20	0.50	0.82
Roof	0.50	1.9	1.5	1.1	0.8	1.8	1.4	1.0	0.8	1.8	1.4	1.0	0.8	1.6	1.3	1.0	0.8
	0.75	2.3	1.7	1.1	0.9	2.1	1.6	1.1	0.8	2.0	1.6	1.1	0.8	1.8	1.4	1.0	0.8
	1.50	3.1	2.0	1.3	0.9	2.8	1.9	1.2	0.9	2.6	1.8	1.2	0.9	2.1	1.6	1.1	0.8
	3.50	4.1	2.4	1.4	1.0	3.6	2.2	1.3	0.9	3.2	2.0	1.3	0.9	2.4	1.7	1.2	0.9
Wall	0.50	2.5	1.8	1.2	0.9	2.5	1.8	1.2	0.9	2.5	1.8	1.2	0.9	2.5	1.8	1.2	0.9
	0.75	2.8	2.0	1.3	0.9	2.8	2.0	1.3	0.9	2.8	2.0	1.3	0.9	2.8	2.0	1.3	0.9
	1.50	2.5	1.8	1.2	0.9	2.5	1.8	1.2	0.9	2.5	1.8	1.2	0.9	2.5	1.8	1.2	0.9
	3.50	2.6	1.9	1.3	0.9	2.6	1.9	1.3	0.9	2.6	1.9	1.3	0.9	2.6	1.9	1.3	0.9
Floor	0.50	2.2	1.7	1.1	0.9	2.3	1.7	1.2	0.9	2.3	1.8	1.2	0.9	2.5	1.8	1.2	0.9
	0.75	2.9	2.0	1.3	0.9	3.1	2.1	1.3	1.0	3.2	2.2	1.4	1.0	3.4	2.3	1.4	1.0
	1.50	4.3	2.6	1.5	1.0	4.7	2.7	1.5	1.1	4.9	2.8	1.6	1.1	5.4	3.1	1.7	1.1
	3.50	6.0	3.1	1.6	1.1	6.6	3.3	1.7	1.1	6.9	3.4	1.7	1.1	7.7	3.7	1.8	1.2

a) *Interpolation shall be permitted to be used for effective emittance values and airspace thicknesses between those listed. Extrapolation below an effective emittance of 0.05 is not permitted.*

SI table A9.4A

TABLE A9.4A Annual Mean R-Value for Cavity Air Spaces

Component	Airspace Thickness (cm)	Climate Zone 1 Effective Emittance 0.05	0.20	0.50	0.82	Climate Zone 2 Effective Emittance 0.05	0.20	0.50	0.82	Climate Zone 3 Effective Emittance 0.05	0.20	0.50	0.82	Climate Zone 4 Effective Emittance 0.05	0.20	0.50	0.82
Roof	1.3	0.44	0.33	0.22	0.16	0.41	0.31	0.21	0.15	0.38	0.29	0.20	0.15	0.35	0.27	0.19	0.14
	1.9	0.61	0.42	0.25	0.18	0.56	0.38	0.24	0.17	0.50	0.35	0.22	0.16	0.44	0.32	0.21	0.16
	3.8	0.98	0.55	0.30	0.20	0.86	0.50	0.28	0.19	0.74	0.45	0.26	0.18	0.62	0.39	0.23	0.17
	8.9	1.42	0.67	0.33	0.21	1.23	0.60	0.30	0.20	1.03	0.53	0.28	0.19	0.83	0.46	0.25	0.18
Wall	1.3	0.43	0.32	0.22	0.16	0.43	0.32	0.22	0.16	0.43	0.32	0.22	0.16	0.43	0.32	0.22	0.16
	1.9	0.49	0.35	0.23	0.17	0.49	0.35	0.23	0.17	0.49	0.35	0.23	0.17	0.49	0.35	0.23	0.17
	3.8	0.43	0.32	0.22	0.16	0.43	0.32	0.22	0.16	0.43	0.32	0.22	0.16	0.43	0.32	0.22	0.16
	8.9	0.45	0.33	0.22	0.16	0.45	0.33	0.22	0.16	0.45	0.33	0.22	0.16	0.45	0.33	0.22	0.16
Floor	1.3	0.28	0.23	0.17	0.13	0.31	0.25	0.18	0.14	0.34	0.27	0.19	0.14	0.37	0.29	0.20	0.15
	1.9	0.30	0.24	0.18	0.14	0.35	0.27	0.19	0.14	0.41	0.31	0.20	0.15	0.48	0.34	0.22	0.16
	3.8	0.33	0.26	0.19	0.14	0.45	0.31	0.21	0.15	0.57	0.37	0.23	0.16	0.70	0.43	0.25	0.17
	8.9	0.38	0.29	0.20	0.15	0.56	0.35	0.22	0.16	0.76	0.43	0.24	0.17	0.96	0.50	0.27	0.19

Component	Airspace Thickness (cm)	Climate Zone 5 Effective Emittance 0.05	0.20	0.50	0.82	Climate Zone 6 Effective Emittance 0.05	0.20	0.50	0.82	Climate Zone 7 Effective Emittance 0.05	0.20	0.50	0.82	Climate Zone 8 Effective Emittance 0.05	0.20	0.50	0.82
Roof	1.3	0.34	0.26	0.19	0.14	0.32	0.25	0.18	0.14	0.31	0.25	0.18	0.14	0.29	0.23	0.17	0.13
	1.9	0.41	0.30	0.20	0.15	0.37	0.28	0.19	0.15	0.36	0.27	0.19	0.14	0.32	0.25	0.18	0.14
	3.8	0.55	0.36	0.22	0.16	0.49	0.33	0.21	0.16	0.45	0.32	0.21	0.15	0.37	0.28	0.19	0.15
	8.9	0.73	0.42	0.24	0.17	0.63	0.38	0.23	0.16	0.57	0.36	0.22	0.16	0.43	0.31	0.20	0.15
Wall	1.3	0.43	0.32	0.22	0.16	0.43	0.32	0.22	0.16	0.43	0.32	0.22	0.16	0.43	0.32	0.22	0.16
	1.9	0.49	0.35	0.23	0.17	0.49	0.35	0.23	0.17	0.49	0.35	0.23	0.17	0.49	0.35	0.23	0.17
	3.8	0.43	0.32	0.22	0.16	0.43	0.32	0.22	0.16	0.43	0.32	0.22	0.16	0.43	0.32	0.22	0.16
	8.9	0.45	0.33	0.22	0.16	0.45	0.33	0.22	0.16	0.45	0.33	0.22	0.16	0.45	0.33	0.22	0.16
Floor	1.3	0.39	0.30	0.20	0.15	0.40	0.30	0.21	0.15	0.41	0.31	0.21	0.15	0.44	0.32	0.21	0.16
	1.9	0.51	0.36	0.23	0.16	0.54	0.37	0.23	0.17	0.55	0.38	0.24	0.17	0.60	0.41	0.25	0.18
	3.8	0.76	0.45	0.26	0.18	0.82	0.48	0.27	0.19	0.86	0.50	0.28	0.19	0.94	0.54	0.29	0.20
	8.9	1.06	0.54	0.28	0.19	1.17	0.58	0.30	0.20	1.22	0.60	0.30	0.20	1.36	0.65	0.32	0.21

a. *Interpolation shall be permitted to be used for effective emittance values and airspace thicknesses between those listed. Extrapolation below an effective emittance of 0.05 is not permitted.*

BSR/ASHRAE/IES Addendum BG
to ANSI/ASHRAE/IES Standard 90.1-2010

Public Review Draft

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

First Public Review (August 2012)
(Draft shows Proposed Changes to Current Standard)

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

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, www.ashrae.org.

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FOREWORD

The purpose of this proposal is to update the exception related to storm windows under envelope alterations. Storm windows / glazing panels added over existing windows can be either inside or outside, but this is not clear in the current language. Additionally, these products are often referred to by names other than storm windows, and the term "panel" is more accurate, particularly for products added to the interior of the window.

Additionally, technology has advanced where these glazing panels can include a low-e coating rather than just clear uncoated glass, providing additional energy savings. It is easily shown that the additional cost for the low-e coating is economically justified. The charts on the next page show the change in life cycle cost for the added low-e coating as a function of scalar ratio, for both nonresidential and residential buildings. Any point on the chart that is negative shows a net savings in life cycle cost, and is therefore cost effective under 90.1 criteria. This analysis was done conservatively using a low-e coating that gives the least improvement in U-factor and SHGC, at a conservatively high incremental cost of $2.50 per ft^2. As can be seen in the charts, the assumed scalar ratio only need be 7.4 or higher to be cost effective, which corresponds to an economic lifetime of only 12 years. These products are designed for a minimum of 20 years. Even with the concerns previously raised about the age and variability of the regression equations, this is clearly cost effective and not a borderline case. Therefore, the exception was updated to also require a low-emissivity coating.

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 BG to 90.1-2010

Revise the Standard as follows (IP and SI Units)

5.1.3 Envelope Alterations. Alterations to the building envelope shall comply with the requirements of Section 5 for insulation, air leakage, and fenestration applicable to those specific portions of the building that are being altered.

Exceptions: The following alterations need not comply with these requirements, provided such alterations will not increase the energy usage of the building:

a. installation of storm windows or glazing panels over existing glazing provided the storm window or glazing panel contains a low-emissivity coating. However, a low-emissivity coating is not required where the existing glazing already has a low-emissivity coating. Installation is permitted to be either on the inside or outside of the existing glazing.

BSR/ASHRAE/IES Addendum BH
to ANSI/ASHRAE/IES Standard 90.1-2010

Public Review Draft

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

First Public Review (August 2012)
(Draft shows Proposed Changes to Current Standard)

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

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, www.ashrae.org.

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FOREWORD

Table 9.6.1 has been modified (and changed to Table 9.6.1A) for the following purposes:

1. *LPDs have been adjusted to account for changes to recommended light levels as published in the new, 10th Edition of the IES Lighting Handbook. Some values have gone up while others have gone down. As an average, the changed LPDs dropped 6%.*
2. *Three new space types have been added in response to user requests: (i) Copy/Print Rooms, (ii) Loading Docks, Interior and (iii) Computer rooms.*
3. *Also in response to user requests, new space types for Assisted Living Facilities were added including corridor, dining area, lobby, restroom, chapel and recreation room. In all cases these modified LPDs are restricted to those spaces that are used primarily by the residents.*
4. *Some space types were renamed for consistency.*
5. *Some table footnotes were added to provide more specific direction.*
6. *Table 9.6.1B was added to provide specific direction on how to select the correct class of play in sports arenas.*

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 BH to 90.1-2010

Revise the Standard as follows

Modify Section 9.6.1(a) as follows:

a. For each space enclosed by partitions that are 80% of the ceiling height or taller, determine the appropriate space type from Table 9.6.1. If a space has multiple functions, where more than one space type is applicable, that space shall be broken up into smaller subspaces, each using their own space type from Table 9.6.1. Any of these subspaces that are smaller in floor area than 20% of the original space and less than 1000 ft^2 need not be broken out separately. Include the floor area of balconies and other projections in this calculation.

BSR/ASHRAE/IES Addendum BH to ANSI/ASHRAE/IESNA Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
First Public Review Draft

Replace current Table 9.6.1 with the following: (Table 9.6.1A and Table 9.6.1B):

TABLE 9.6.1A Lighting Power Density Allowances Using the Space-by-Space Method

Common Space Types[1]	LPD watts/sq.ft	RCR Threshold
Audience Seating Area ~~– Permanent~~		
... in an auditorium	~~0.79~~ 0.63	6
... in a convention center	0.82	4
… in a gymnasium	~~0.43~~ 0.65	6
... in a motion picture theater	1.14	4
... in a penitentiary	~~0.43~~ 0.28	4
... in a performing arts theater	2.43	8
... in a religious building	1.53	4
... in a sports arena	0.43	4
… otherwise	0.43	4
Atrium		
… that is ☐ 40' in height	0.03 per foot in total height	NA
… that is > 40' in height	0.40 + 0.02 per foot in total height	NA
Banking Activity Area	~~1.38~~ 1.01	6
Breakroom (See Lounge/Breakroom)		
Classroom/Lecture Hall/Training Room		
… in a penitentiary	1.34	4
… otherwise	1.24	4
Conference/Meeting/Multipurpose Room	1.23	6
Confinement Cells	~~1.10~~ 0.81	6
Copy/Print Room	0.72	6
Corridor[2]		
… in an Assisted Living Facility (and used primarily by residents)[3]	0.92	Width < 8'
… in a hospital	~~0.89~~ 0.79	Width < 8'
… in a manufacturing facility	0.41	Width < 8'
… otherwise	0.66	Width < 8'
Courtroom	1.72	6
Computer Room	1.71	4
Dining Area		
… in a penitentiary	~~1.07~~ 0.96	6
… in an Assisted Living Facility (and used primarily by residents)[3]	1.90	4
… in Bar/Lounge or Leisure Dining	~~1.31~~ 1.07	4
… in Cafeteria or Fast Food Dining	0.65	4
… in Family Dining	0.89	4
… otherwise	0.65	4
Electrical/Mechanical Room	~~0.95~~ 0.42	6
Emergency Vehicle Garage	0.56	4
Food Preparation Area	~~0.99~~ 1.21	6
Guest Room	0.47	6
Laboratory		
… in or as a classroom	~~1.28~~ 1.43	6
… otherwise	1.81	6

Laundry/Washing Area	0.60	4
Loading Dock, Interior	0.47	6
Lobby		
… in an Assisted Living Facility (and used primarily by residents)[3]	1.80	4
… for an elevator	0.64	6
… in a hotel	1.06	4
… in a motion picture theater	~~0.52~~ 0.59	4
… in a performing arts theater	2.00	6
… otherwise	0.90	4
Locker Room	0.75	6
Lounge/Breakroom		
… in a healthcare facility	~~1.07~~ 0.92	6
… otherwise	0.73	4
Office		
… enclosed	1.11	8
… open plan	0.98	4
Parking Area, Interior	0.19	4
Pharmacy Area	~~1.14~~ 1.68	6
Restroom		
… in an Assisted Living Facility (and used primarily by residents)[3]	1.21	8
… otherwise	0.98	8
Sales Area[4]	~~1.68~~ 1.59	6
Seating Area, General	0.54	4
Stairwell	0.69	10
Storage Room	0.63	6
Vehicular Maintenance Area	0.67	4
Workshop	1.59	6

1 - In cases where both a common space type and a building area specific space type are listed, the building area specific space type shall apply
2 - In corridors, the extra LPD allowance is permitted when the width of the corridor is less than 8' and is not based on the RCR
3 - ***An 'Assisted Living Facility' is a*** residential facility, for people with special needs or disabilities, that provides help with everyday tasks such as bathing, dressing, and taking medication.
4 - For accent lighting, see Section 9.6.2(b)

Building Type Specific Space Types	LPD watts/sq.ft	RCR Threshold
Assisted Living Facility[3]		
… in a chapel (used primarily by residents)	2.21	4
… in a recreation room (used primarily by residents)	2.41	6
Automotive (See Vehicular Maintenance Area above)		
Convention Center - Exhibit Space	1.45	4
Dormitory - Living Quarters	0.38	8
Fire Station - Sleeping Quarters	~~0.25~~ 0.22	6
Gymnasium/Fitness Center		
… in an Exercise Area	0.72	4
… in a Playing Area	1.20	4
Healthcare Facility		
… in an Exam/Treatment Room	1.66	8
… in an Imaging Room	~~1.32~~ 1.51	6
… in a Medical Supply Room	~~1.27~~ 0.74	6
… in a Nursery	0.88	6
… in a Nurse's Station	~~0.87~~ 0.71	6

… in an Operating Room	~~1.89~~ 2.48	6
… in a Patient Room	0.62	6
… in a Physical Therapy Room	0.91	6
… in a Recovery Room	1.15	6
Library		
… in a Reading Area	~~0.93~~ 1.06	4
… in the Stacks	1.71	4
Manufacturing Facility		
… in a detailed manufacturing area	1.29	4
… in an Equipment Room	~~0.95~~ 0.74	6
… in an Extra High Bay Area (> 50' floor-to-ceiling height)	1.05	4
… in a High Bay Area (25-50' floor-to-ceiling height)	1.23	4
… in a Low Bay Area (< 25' floor-to-ceiling height)	1.19	4
Museum		
… in a General Exhibition Area	1.05	6
… in a Restoration Room	1.02	6
Performing Arts Theater - Dressing Room	~~0.40~~ 0.61	6
Post Office - Sorting Area	0.94	4
Religious Buildings		
… in a Fellowship Hall	0.64	4
… in a Worship/Pulpit/Choir Area	1.53	4
Retail Facilities		
… in a Dressing/Fitting Room	~~0.87~~ 0.71	8
… in a Mall Concourse	1.10	4
Sports Arena - Playing Area		
… for a Class I facility	~~3.01~~ 3.68	4
… for a Class II facility	~~1.92~~ 2.40	4
… for a Class III facility	~~1.20~~ 1.80	4
… for a Class IV facility	~~0.72~~ 1.20	4
Transportation Facility		
… in a baggage/carousel Area	~~0.76~~ 0.53	4
… in an Airport Concourse	0.36	4
… at a Terminal Ticket Counter	~~1.08~~ 0.80	4
Warehouse - Storage Area		
…for medium to bulky, palletized items	0.58	4
… for smaller, hand-carried items[5]	0.95	6

5 - sometimes referred to as a 'Picking Area'.

BSR/ASHRAE/IES Addendum BI
to ANSI/ASHRAE/IES Standard 90.1-2010

Public Review Draft

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

First Public Review (August 2012)
(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

In 2005, ASHRAE approved amendments to Standard 90.1 (addendum f to ASHRAE 90.1-2004) adopting new minimum energy efficiency standards for 3-phase air-cooled commercial air conditioners and heat pumps below 65,000 Btu/h. These standards became effective on January 23, 2006.

On June 27, 2011, the Department of Energy (DOE) issued a final rule amending the federal minimum energy efficiency standards for the single-phase residential central air conditioners and heat pumps. This proposal harmonizes the minimum energy efficiencies of 3-phase air-cooled commercial air conditioners and heat pumps less than 65,000 Btu/h with the efficiencies adopted by DOE for residential central air conditioners. The new SEERs and HSPFs will become effective on January 1, 2015.

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 BI to 90.1-2010

Revise the Standard as follows

Revise Tables 6.8.1 A and B as follows:

TABLE 6.8.1A Electrically Operated Unitary Air Conditioners and Condensing Units – Minimum Efficiency Requirements (IP)

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Condition	Minimum Efficiency	Test Procedure[a]
Air Conditioners, air Cooled	<65,000 Btu/h[b]	All	Split System	13.0 SEER	AHRI 210/240
			Single Package	13.0 SEER (before 1/1/2015) 14 SEER (as of 1/1/2015)	
Through-the-wall (air cooled)	≤30,000 Btu/h[b]	All	Split system	12.0 SEER	
			Single Package	12.0 SEER	
Air conditioners, air cooled	≥65,000 Btu/h and <135,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.2 EER 11.4 IEER	AHRI 340/360

		All other	Split System and Single Package	11.0 EER 11.2 IEER	
	≥135,000 Btu/h and <240,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.0 EER 11.2 IEER	
		All other	Split System and Single Package	10.8 EER 11.0 IEER	
	≥240,000 Btu/h and <760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	10.0 EER 10.1 IEER	
		All other	Split System and Single Package	9.8 EER 9.9 IEER	
	≥760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	9.7 EER 9.8 IEER	
		All other	Split System and Single Package	9.5 EER 9.6 IEER	
Air Conditioners, water Cooled	< 65,000 Btu/h	All	Split System and Single Package	12.1 EER 12.3 IEER	AHRI 210/240
	≥65,000 Btu/h and <135,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	~~11.5 EER (before 6/1/2011)~~ 12.1 EER (as of 6/1/2011) ~~11.7 IEER (before 6/1/2011)~~ 12.3 IEER (as of 6/1/2011)	AHRI 340/360
		All other	Split System and Single Package	~~11.3 EER (before 6/1/2011)~~ 11.9 EER (as of 6/1/2011) ~~11.5 IEER (before 6/1/2011)~~ 12.1 IEER (as of 6/1/2011)	
	≥135,000 Btu/h and <240,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	~~11.0 EER (before 6/1/2011)~~ 12.5 EER (as of 6/1/2011) ~~11.2 IEER (before 6/1/2011)~~ 12.5 IEER (as of 6/1/2011)	
		All other	Split System and Single Package	~~10.8 EER (before 6/1/2011)~~ 12.3 EER (as of 6/1/2011) ~~11.0 IEER (before 6/1/2011)~~ 12.5 IEER (as of 6/1/2011)	
	≥240,000 Btu/h and <760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	~~11.0 EER (before 6/1/2011)~~ 12.4 EER (as of 6/1/2011) ~~11.1 IEER (before 6/1/2011)~~ 12.6 IEER (as of 6/1/2011)	
		All other	Split System and Single Package	~~10.8 EER (before 6/1/2011)~~ 12.2 EER (as of 6/1/2011) ~~10.9 IEER (before 6/1/2011)~~ 12.4 IEER (as of 6/1/2011)	

TABLE 6.8.1A Electrically Operated Unitary Air Conditioners and Condensing Units – Minimum Efficiency Requirements *(continued) (IP)*

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Condition	Minimum Efficiency[a]	Test Procedure[b]
Air Conditioners, water Cooled	≥760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	~~11.0 EER (before 6/1/2011)~~ 12.2 EER ~~(as of 6/1/2011)~~ ~~11.1 IEER (before 6/1/2011)~~ 12.4 IEER ~~(as of 6/1/2011)~~	AHRI 340/360
		All other	Split System and Single Package	~~10.8 EER (before 6/1/2011)~~ 12.0 EER ~~(as of 6/1/2011)~~ ~~10.9 IEER (before 6/1/2011)~~ 12.2 IEER (as of 6/1/2011)	
Air Conditioners, evaporatively cooled	< 65,000 Btu/h[b]	All	Split System and Single Package	12.1 EER 12.3 IEER	AHRI 210/240
	≥65,000 Btu/h and <135,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	~~11.5 EER (before 6/1/2011)~~ 12.1 EER (as of 6/1/2011) ~~11.7 IEER (before 6/1/2011)~~ 12.3 IEER (as of 6/1/2011)	AHRI 340/360
		All other	Split System and Single Package	~~11.3 EER (before 6/1/2011)~~ 11.9 EER (as of 6/1/2011) ~~11.5 IEER (before 6/1/2011)~~ 12.1 IEER (as of 6/1/2011)	
	≥135,000 Btu/h and <240,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	~~11.0 EER (before 6/1/2011)~~ 12.0 EER (as of 6/1/2011) ~~11.2 IEER (before 6/1/2011)~~ 12.2 IEER (as of 6/1/2011)	
		All other	Split System and Single Package	~~10.8 EER (before 6/1/2011)~~ 11.8 EER (as of 6/1/2011) ~~11.0 IEER (before 6/1/2011)~~ 12.0 IEER (as of 6/1/2011)	
	≥240,000 Btu/h and <760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	~~11.0 EER (before 6/1/2011)~~ 11.9 EER (as of 6/1/2011) ~~11.1 IEER (before 6/1/2011)~~ 12.1 IEER (as of 6/1/2011)	
		All other	Split System and Single Package	~~10.8 EER (before 6/1/2011)~~ 11.7 EER (as of 6/1/2011) ~~10.9 IEER (before 6/1/2011)~~ 11.9 IEER (as of 6/1/2011)	
	≥760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	~~11.0 EER (before 6/1/2011)~~ 11.7 EER (as of 6/1/2011) ~~11.1 IEER (before 6/1/2011)~~ 11.9 IEER (as of 6/1/2011)	
		All other	Split System and Single Package	~~10.8 EER (before 6/1/2011)~~ 11.5 EER (as of 6/1/2011) ~~10.9 IEER (before 6/1/2011)~~ 11.7 IEER (as of 6/1/2011)	
Condensing units air cooled	≥135,000Btu/h			~~10.1 EER (before 6/1/2011)~~ 10.5 EER (as of 6/1/2011) ~~11.4 IEER (before 6/1/2011)~~ 11.8 IEER (as of 6/1/2011)	AHRI 365
Condensing units water cooled	≥135,000Btu/h			~~13.1 EER (before 6/1/2011)~~ 13.5 EER (as of 6/1/2011) ~~13.6 IEER (before 6/1/2011)~~ 14.0 IEER (as of 6/1/2011)	
Condensing units evaporatively cooled	≥135,000Btu/h			~~13.1 EER (before 6/1/2011)~~ 13.5 EER (as of 6/1/2011) ~~13.6 IEER (before 6/1/2011)~~ 14.0 IEER (as of 6/1/2011)	

[a] Section 12 contains a complete specification of the referenced test procedure, including the reference year version of the test procedure
[b] Single phase, air cooled air conditioners <65,000 Btu/hr are regulated by NAECA, SEER values are those set by NAECA

TABLE 6.8.1 B Electrically Operated Unitary and Applied Heat Pumps—Minimum Efficiency Requirements

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Condition	Minimum Efficiency	Test Procedure[a]
Air cooled (cooling mode)	<65,000 Btu/h[b]	All	Split System	13.0 SEER (before 1/1/2015) 14 SEER (as of 1/1/2015)	AHRI 210/240
			Single Packaged	13.0 SEER (before 1/1/2015) 14 SEER (as of 1/1/2015)	
Through-the-wall, air cooled	≤30,000 Btu/h[b]	All	Split System	12.0 SEER	
			Single Packaged	12.0 SEER	
Air Cooled (Cooling Mode)	≥65,000 Btu/h and <135,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.0 EER 11.2 IEER	AHRI 340/360
		All other	Split System and Single Package	10.8 EER 11.0 IEER	
	≥135,000 Btu/h and <240,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	10.6 EER 10.7 IEER	
		All other	Split System and Single Package	10.4 EER 10.5 IEER	
	≥240,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	9.5 EER 9.6 IEER	
		All other	Split System and Single Package	9.3 EER 9.4 IEER	
Water to Air: Water Loop (cooling mode)	<17,000 Btu/h	All	86 °F entering water	12.2 EER	ISO 13256-1
	≥17,000 Btu/h and <65,000 Btu/h	All	86 °F entering water	13 EER	
	≥65,000 Btu/h and <135,000 Btu/h	All	86 °F entering water	13 EER	
Water to Air: Ground Water (cooling mode)	<135,000 Btu/h	All	59 °F entering water	18.0 EER	
Brine to Air: Ground Loop (cooling mode)	<135,000 Btu/h	All	77 F entering water	14.1 EER	

TABLE 6.8.1 B Electrically Operated Unitary and Applied Heat Pumps—Minimum Efficiency Requirements *(continued)*

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Condition	Minimum Efficiency[a]	Test Procedure[b]
Water to Water: Water Loop (cooling mode)	<135,000 Btu/h	All	86 °F entering water	10.6 EER	ISO-13256-2
Water to Water: Ground Water (Cooling Mode)	<135,000 Btu/h	All	59 °F entering water	16.3 EER	
Brine to Water: Ground Loop (cooling mode)	<135,000 Btu/h	All	77 °F entering water	12.1 EER	
Air cooled (heating mode)	<65,000 Btu/h[b]	–	Split System	7.7 HSPF (before 1/1/2015) 8.2 HSPF (as of 1/1/2015)	AHRI 210/240
		–	Single Package	7.7 HSPF (before 1/1/2015) 8.0 HSPF (as of 1/1/2015)	
Through-the-wall, (air cooled, heating mode)	≤30,000 Btu/h[b] (cooling capacity)	–	Split System	7.4 HSPF	
		–	Single Package	7.4 HSPF	
Air Cooled (Heating Mode)	≥65,000 Btu/h and <135,000 Btu/h (Cooling Capacity)	–	47ºF db/43ºF wb Outdoor Air	3.3 COP	AHRI 340/360
			17ºF db/15ºF wb Outdoor Air	2.25 COP	
	≥135,000 Btu/h (Cooling Capacity)	–	47ºF db/43ºF wb Outdoor Air	3.2 COP	
			17ºF db/15ºF wb Outdoor Air	2.05 COP	
Water to Air: Water Loop (heating mode)	<135,000 Btu/h (cooling capacity)	–	68 °F entering water	4.3 COP	ISO 13256-1
Water to Air: Ground Water (heating mode)	<135,000 Btu/h (cooling capacity)	–	50 °F entering water	3.7 COP	
Brine to Air: Ground Loop (heating mode)	<135,000 Btu/h (cooling capacity)	–	32 °F entering fluid	3.2 COP	
Water to Water: Water Loop (heating mode)	<135,000 Btu/h (cooling capacity)	–	68 °F entering water	3.7 COP	ISO 13256-2
Water to Water: Ground Water (heating mode)	<135,000 Btu/h (cooling capacity)	–	50 °F entering water	3.1 COP	
Brine to Water: Ground Loop (heating mode)	<135,000 Btu/h (cooling capacity)	–	32 °F entering fluid	2.5 COP	

[a] Section 12 contains a complete specification of the referenced test procedure, including the reference year version of the test procedure
[b] Single phase, air cooled air conditioners <65,000 Btu/hr are regulated by NAECA, SEER values are those set by NAECA

BSR/ASHRAE/IES Addendum BJ
to ANSI/ASHRAE/IES Standard 90.1-2010

Public Review Draft

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

First Public Review (August 2012)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

A product class for 3-phase small duct high velocity (SDHV) air conditioners and heart pumps was first established in the 2007 version of ASHRAE 90.1. Subsequently, addendum j to ASHRAE 90.1-2010 deleted the product class. The deletion was based on information that all SDHV produced and sold in the market place were single-phase residential products covered under the National Energy Conservation Act (NAECA). However, since the deletion of the product class, SDHV manufacturers have expressed their intention to introduce 3-phase products in the near future.

This proposal re-establishes the product class for small duct high velocity air conditioners and heat pumps. The minimum energy efficiency levels proposed are 11 SEER for air conditioners and 11 SEER/6.8 HSPF for heat pumps which are identical to the efficiencies established by DOE for single-phase residential SDHV products.

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 BJ to 90.1-2010

Revise the Standard as follows

Revise Tables 6.8.1 A & B as follows:

TABLE 6.8.1A Electrically Operated Unitary Air Conditioners and Condensing Units – Minimum Efficiency Requirements (IP)

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Condition	Minimum Efficiency	Test Procedure[b]
Air Conditioners, air Cooled	<65,000 Btu/h[b]	All	Split System	13.0 SEER	AHRI 210/240
			Single Package	13.0 SEER	
Through-the-wall (air cooled)	≤30,000 Btu/h[b]	All	Split system	12.0 SEER	
			Single Package	12.0 SEER	
Small-duct high-velocity (air cooled)	<65,000 Btu/h[b]	All	Split System	11.0 SEER	
Air conditioners, air cooled	≥65,000 Btu/h and <135,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.2 EER 11.4 IEER	AHRI 340/360
		All other	Split System and Single Package	11.0 EER 11.2 IEER	

	≥135,000 Btu/h and <240,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.0 EER 11.2 IEER	
		All other	Split System and Single Package	10.8 EER 11.0 IEER	
	≥240,000 Btu/h and <760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	10.0 EER 10.1 IEER	
		All other	Split System and Single Package	9.8 EER 9.9 IEER	
	≥760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	9.7 EER 9.8 IEER	
		All other	Split System and Single Package	9.5 EER 9.6 IEER	
Air Conditioners, water Cooled	< 65,000 Btu/h	All	Split System and Single Package	12.1 EER 12.3 IEER	AHRI 210/240
	≥65,000 Btu/h and <135,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.5 EER (before 6/1/2011) 12.1 EER (as of 6/1/2011) 11.7 IEER (before 6/1/2011) 12.3 IEER (as of 6/1/2011)	AHRI 340/360
		All other	Split System and Single Package	11.3 EER (before 6/1/2011) 11.9 EER (as of 6/1/2011) 11.5 IEER (before 6/1/2011) 12.1 IEER (as of 6/1/2011)	
	≥135,000 Btu/h and <240,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.0 EER (before 6/1/2011) 12.5 EER (as of 6/1/2011) 11.2 IEER (before 6/1/2011) 12.5 IEER (as of 6/1/2011)	
		All other	Split System and Single Package	10.8 EER (before 6/1/2011) 12.3 EER (as of 6/1/2011) 11.0 IEER (before 6/1/2011) 12.5 IEER (as of 6/1/2011)	
	≥240,000 Btu/h and <760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.0 EER (before 6/1/2011) 12.4 EER (as of 6/1/2011)11.1 IEER (before 6/1/2011) 12.6 IEER (as of 6/1/2011)	
		All other	Split System and Single Package	10.8 EER (before 6/1/2011) 12.2 EER (as of 6/1/2011) 10.9 IEER (before 6/1/2011) 12.4 IEER (as of 6/1/2011)	

TABLE 6.8.1A Electrically Operated Unitary Air Conditioners and Condensing Units – Minimum Efficiency Requirements *(continued) (IP)*

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Condition	Minimum Efficiency	Test Procedure[a]
Air Conditioners, water Cooled	≥760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.0 EER (before 6/1/2011) 12.2 EER (as of 6/1/2011) 11.1 IEER (before 6/1/2011) 12.4 IEER (as of 6/1/2011	AHRI 340/360
		All other	Split System and Single Package	10.8 EER (before 6/1/2011) 12.0 EER (as of 6/1/2011) 10.9 IEER (before 6/1/2011) 12.2 IEER (as of 6/1/2011)	
Air Conditioners, evaporatively cooled	< 65,000 Btu/h[b]	All	Split System and Single Package	12.1 EER 12.3 IEER	AHRI 210/240
	≥65,000 Btu/h and <135,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.5 EER (before 6/1/2011) 12.1 EER (as of 6/1/2011) 11.7 IEER (before 6/1/2011) 12.3 IEER (as of 6/1/2011)	AHRI 340/360
		All other	Split System and Single Package	11.3 EER (before 6/1/2011) 11.9 EER (as of 6/1/2011) 11.5 IEER (before 6/1/2011) 12.1 IEER (as of 6/1/2011)	
	≥135,000 Btu/h and <240,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.0 EER (before 6/1/2011) 12.0 EER (as of 6/1/2011) 11.2 IEER (before 6/1/2011) 12.2 IEER (as of 6/1/2011)	
		All other	Split System and Single Package	10.8 EER (before 6/1/2011) 11.8 EER (as of 6/1/2011) 11.0 IEER (before 6/1/2011) 12.0 IEER (as of 6/1/2011)	
	≥240,000 Btu/h and <760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.0 EER (before 6/1/2011) 11.9 EER (as of 6/1/2011) 11.1 IEER (before 6/1/2011) 12.1 IEER (as of 6/1/2011)	
		All other	Split System and Single Package	10.8 EER (before 6/1/2011) 11.7 EER (as of 6/1/2011) 10.9 IEER (before 6/1/2011) 11.9 IEER (as of 6/1/2011)	
	≥760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.0 EER (before 6/1/2011) 11.7 EER (as of 6/1/2011) 11.1 IEER (before 6/1/2011) 11.9 IEER (as of 6/1/2011)	
		All other	Split System and Single Package	10.8 EER (before 6/1/2011) 11.5 EER (as of 6/1/2011) 10.9 IEER (before 6/1/2011) 11.7 IEER (as of 6/1/2011)	
Condensing units air cooled	≥135,000Btu/h			10.1 EER (before 6/1/2011) 10.5 EER (as of 6/1/2011) 11.4 IEER (before 6/1/2011) 11.8 IEER (as of 6/1/2011)	AHRI 365
Condensing units water cooled	≥135,000Btu/h			13.1 EER (before 6/1/2011) 13.5 EER (as of 6/1/2011) 13.6 IEER (before 6/1/2011) 14.0 IEER (as of 6/1/2011)	
Condensing units evaporatively cooled	≥135,000Btu/h			13.1 EER (before 6/1/2011) 13.5 EER (as of 6/1/2011) 13.6 IEER (before 6/1/2011) 14.0 IEER (as of 6/1/2011)	

[a] Section 12 contains a complete specification of the referenced test procedure, including the reference year version of the test procedure
[b] Single phase, air cooled air conditioners <65,000 Btu/hr are regulated by NAECA, SEER values are those set by NAECA

TABLE 6.8.1 B Electrically Operated Unitary and Applied Heat Pumps—Minimum Efficiency Requirements

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Condition	Minimum Efficiency[a]	Test Procedure[ba]
Air cooled (cooling mode)	<65,000 Btu/h[eb]	All	Split System	13.0 SEER	AHRI 210/240
			Single Packaged	13.0 SEER	
Through-the-wall, air cooled	≤30,000 Btu/h[b]	All	Split System	12.0 SEER	
			Single Packaged	12.0 SEER	
Single-duct high-velocity air cooled	<65,000 Btu/h[b]	All	Split System	11.0 SEER	
Air Cooled (Cooling Mode)	≥65,000 Btu/h and <135,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.0 EER 11.2 IEER	AHRI 340/360
		All other	Split System and Single Package	10.8 EER 11.0 IEER	
	≥135,000 Btu/h and <240,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	10.6 EER 10.7 IEER	
		All other	Split System and Single Package	10.4 EER 10.5 IEER	
	≥240,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	9.5 EER 9.6 IEER	
		All other	Split System and Single Package	9.3 EER 9.4 IEER	
Water to Air: Water Loop (cooling mode)	<17,000 Btu/h	All	86 °F entering water	12.2 EER	ISO 13256-1
	≥17,000 Btu/h and <65,000 Btu/h	All	86 °F entering water	13 EER	
	≥65,000 Btu/h and <135,000 Btu/h	All	86 °F entering water	13 EER	
Water to Air: Ground (cooling mode)	<135,000 Btu/h	All	59 °F entering water	18.0 EER	
Brine to Air: Ground Loop (cooling mode)	<135,000 Btu/h	All	77 F entering water	14.1 EER	

TABLE 6.8.1 B Electrically Operated Unitary and Applied Heat Pumps— Minimum Efficiency Requirements *(continued)*

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Condition	Minimum Efficiency[a]	Test Procedure[b]
Water to Water: Water Loop (cooling mode)	<135,000 Btu/h	All	86 °F entering water	10.6 EER	ISO-13256-2
Water to Water: Ground Water (Cooling Mode)	<135,000 Btu/h	All	59 °F entering water	16.3 EER	
Brine to Water: Ground Loop (cooling mode)	<135,000 Btu/h	All	77 °F entering water	12.1 EER	
Air cooled (heating mode)	<65,000 Btu/h[b]	–	Split System	7.7 HSPF	AHRI 210/240
		–	Single Package	7.7 HSPF	
Through-the-wall, (air cooled, heating mode)	≤30,000 Btu/h[b] (cooling capacity)	–	Split System	7.4 HSPF	
		–	Single Package	7.4 HSPF	
Small-Duct high velocity (air cooled, heating mode)	<65,000 Btu/h[b]	–	Split System	6.8 HSPF	
Air Cooled (Heating Mode)	≥65,000 Btu/h and <135,000 Btu/h (Cooling Capacity)	–	47ºF db/43ºF wb Outdoor Air	3.3 COP	AHRI 340/360
			17ºF db/15ºF wb Outdoor Air	2.25 COP	
	≥135,000 Btu/h (Cooling Capacity)	–	47ºF db/43ºF wb Outdoor Air	3.2 COP	
			17ºF db/15ºF wb Outdoor Air	2.05 COP	
Water to Air: Water Loop (heating mode)	<135,000 Btu/h (cooling capacity)	–	68 °F entering water	4.3 COP	ISO 13256-1
Water to Air: Ground Water (heating mode)	<135,000 Btu/h (cooling capacity)	–	50 °F entering water	3.7 COP	
Brine to Air: Ground Loop (heating mode)	<135,000 Btu/h (cooling capacity)	–	32 °F entering fluid	3.2 COP	
Water to Water: Water Loop (heating mode)	<135,000 Btu/h (cooling capacity)	–	68 °F entering water	3.7 COP	ISO 13256-2
Water to Water: Ground Water (heating mode)	<135,000 Btu/h (cooling capacity)	–	50 °F entering water	3.1 COP	
Brine to Water: Ground Loop (heating mode)	<135,000 Btu/h (cooling capacity)	–	32 °F entering fluid	2.5 COP	

[a] Section 12 contains a complete specification of the referenced test procedure, including the reference year version of the test procedure
[b] Single phase, air cooled air conditioners <65,000 Btu/hr are regulated by NAECA, SEER values are those set by NAECA

BSR/ASHRAE/IES Addendum BK
to ANSI/ASHRAE/IES Standard 90.1-2010

Public Review Draft

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

First Public Review (August 2012)
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FOREWORD

In 2009, ASHRAE amended the minimum energy efficiency standards for standard-sized packaged terminal equipment to be consistent with the minimum federal energy efficiencies established by the Department of Energy (DOE). These minimum standards will become effective on October 8, 2012. When developing these standards, DOE set the minimum EERs for PTACs are a lower level than PTHPs.

This proposal amends the minimum energy efficiency requirements for standard-size packaged terminal air conditioners and raises the minimum EER to the same level as the packaged terminal heat pumps. This new minimum efficiency will become effective on January 1, 2015.

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 BK to 90.1-2010

Revise Table 6.8.1D as follows:

TABLE 6.8.1D Electrically Operated Packaged Terminal Air Conditioners, Packaged Terminal Heat Pumps, Single-Package Vertical Air Conditioners, Single-Package Vertical Heat Pumps, Room Air Conditioners, and Room Air-Conditioner Heat Pumps—Minimum Efficiency Requirements (IP Units)

Equipment Type	Size Category (Input)	Subcategory or Rating Condition	Minimum Efficiency[a]	Test Procedure[b]
PTAC (cooling mode) standard size	All capacities	95°F db outdoor air	~~12.5 – (0.213 x Cap/1000)c EER (before 10/08/2012)~~ 13.8 – (0.300 × Cap/1000)[c] EER (~~as of 10/08/2012~~ before 1/1/2015) 14.0 – (0.300 × Cap/1000)[c] EER (as of 1/1/2015)	AHRI 310/380

The remainder of the Table remains unchanged

BSR/ASHRAE/IES Addendum BL
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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. This methodology is consistent with that currently in use by other codes and guidelines such as the State of California, Title 24 and the New Buildings Institute, Comnet. The inclusion of this methodology is necessary for maintaining consistent baseline building packaged equipment efficiency ratings between all users.

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 BL to 90.1-2010

Revise the Standard as follows (IP Units)

11.3.2 HVAC Systems.

c. Where *efficiency* ratings~~, such as IEER and ICOP,~~ include supply fan energy, the~~ descriptor shall be broken down into its components~~ *efficiency* rating shall be adjusted to remove the supply fan energy from the *efficiency* rating. For Budget System Types 3, 4, 6, 9, and 11 calculate the minimum $COP_{nfcooling}$ and $COP_{nfheating}$ using the equation for the applicable performance rating as indicated in Table 6.8.1A-D.

$$COP_{nfcooling} = 0.33*EER$$

$$COP_{nfcooling} = -0.0061*SEER^2+0.37*SEER$$

$COP_{nfheating} = 1.07*COP$ (applies to heat pump heating efficiency only)

$$COP_{nfheating} = 0.46*HSPF$$

Where:
$COP_{nfcooling}$ and $COP_{nfheating}$ = The respective packaged HVAC equipment cooling and heating energy *efficiency* to be used in the *budget building design* which excludes supply fan power.
EER, SEER, COP, HSPF shall be at AHRI test conditions.

~~so that supply f~~ Fan energy ~~can~~ 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.

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. 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.

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~~, such as IEER and ICOP,~~ include supply fan energy, the ~~descriptor shall be broken down into its components~~ *efficiency* rating shall be adjusted to remove the supply fan energy from the *efficiency* rating. For Baseline HVAC Systems 3, 4, 5, and 6 calculate the minimum $COP_{nfcooling}$ and $COP_{nfheating}$ using the equation for the applicable performance rating as indicated in Table 6.8.1A-D.

$$COP_{nfcooling} = 0.33*EER$$

$$COP_{nfcooling} = -0.0061*SEER^2+0.37*SEER$$

$COP_{nfheating} = 1.07*COP$ (applies to heat pump heating efficiency only)

$$COP_{nfheating} = 0.46*HSPF$$

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.
~~so that supply f~~ Fan energy ~~can~~ 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. 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.

Revise the Standard as follows (SI Units)

11.3.2 HVAC Systems.

c. Where *efficiency* ratings~~, such as IEER and ICOP,~~ include supply fan energy, the ~~descriptor shall be broken down into its components~~ *efficiency* rating shall be adjusted to remove the supply fan energy from the *efficiency* rating. For Budget System Types 3, 4, 6, 9, and 11 calculate the minimum $COP_{nfcooling}$ and $COP_{nfheating}$ using the equation for the applicable performance rating as indicated in Table 6.8.1A-D.

$$COP_{nfcooling} = 1.14*COP$$

$$COP_{nfcooling} = -0.021*SCOP^2+1.26*SCOP \text{ (applies to cooling efficiency only)}$$
If given $SCOP_C$, $SCOP_C=SCOP$

$$COP_{nfheating} = 1.07*COP_H \text{ (applies to heat pump heating efficiency only)}$$

$$COP_{nfheating} = 1.56*SCOP_H$$

Where:
$COP_{nfcooling}$ and $COP_{nfheating}$ = The respective packaged HVAC equipment cooling and heating energy *efficiency* to be used in the *budget building design* which excludes supply fan power.
COP, SCOP, $SCOP_C$, $SCOP_H$ shall be at AHRI test conditions.
~~so that supply f~~ Fan energy ~~can~~ 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.

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. 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.

G3.1.2.2 **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~~, such as IEER and ICOP,~~ include supply fan energy, the ~~descriptor shall be broken down into its components~~ *efficiency* rating shall be adjusted to remove the supply fan energy from the *efficiency* rating. For Baseline HVAC Systems 3, 4, 5, and 6 calculate the minimum $COP_{nfcooling}$ and $COP_{nfheating}$ using the equation for the applicable performance rating as indicated in Table 6.8.1A-D.

$$COP_{nfcooling} = 1.14*COP$$

$$COP_{nfcooling} = -0.021*SCOP^2+1.26*SCOP \text{ (applies to cooling efficiency only)}$$
If given $SCOP_C$, $SCOP_C=SCOP$

$$\underline{COP_{nfheating} = 1.07*COP_{H}} \text{ (applies to heat pump heating efficiency only)}$$

$$\underline{COP_{nfheating} = 1.56*SCOP_{H}}$$

Where:
$\underline{COP_{nfcooling}}$ and $\underline{COP_{nfheating}}$ = The respective packaged HVAC equipment cooling and heating energy *efficiency* to be used in the *baseline building* which excludes supply fan power.
COP, SCOP, $\underline{SCOP_{C}}$, $\underline{SCOP_{H}}$ shall be at AHRI test conditions.
~~so that supply f~~ Fan energy ~~can~~ 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. 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.

BSR/ASHRAE/IES Addendum BN
to ANSI/ASHRAE/IES Standard 90.1-2010

Public Review Draft

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

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BSR/ASHRAE/IES Addendum BN to ANSI/ASHRAE/IESNA Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
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FOREWORD

Submetering requirements were added to ASHRAE 90.1-2010 through Addendum bz. The proposed addendum expands the submetering requirements to cover all fuels that are used by a building. This will ensure that the building owners and operators receive information about all of the energy being used by building equipment.

The requirements were changed to be more appropriate for 90.1-2010. The current requirements in Addendum bz are significantly more stringent than the submetering requirements in ASHRAE Standard 189.1 for green buildings. In addition, there are cases where the submetering requirements would not be cost-justified, due to the number of submeters required, associated installation costs, and potentially low energy cost savings.

By focusing the metering requirements on buildings in ASHRAE 90.1, the proposed addendum will ensure that the requirement is cost effective and will result in energy savings, especially in multi-building sites.

By requiring that all major forms of energy are metered, the proposed addendum will ensure that all opportunities for all types of energy and cost savings are addressed, rather than for just one form of energy.

By making these changes, the standard will prevent situations where hundreds of submeters are installed at a significant cost, especially for major renovations at existing buildings (e.g., hotels and motels with hundreds of fan coil units, PTACs, rooftop units, exhaust fans, etc), that are likely not to be cost-effective.

This proposal was reviewed by the ASHRAE Mechanical Subcommittee and the Lighting Subcommittee, since it the meters would be receiving and reporting data from mechanical as well as lighting equipment in a building.

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 BN to 90.1-2010

Revise the Standard as follows (I-P units):

8.4.3 Electrical Energy Monitoring

8.4.2~~3~~.1 Monitoring. Measurement devices shall be installed in new buildings to monitor the electrical energy use for each of the following separately:

a. Total electrical energy.
b. HVAC Systems.
c. Interior lighting.

d. Exterior lighting.
e. Receptacle circuits.

Exceptions to 8.4.3.1: Up to 10% of the load for each of the categories b through e shall be allowed to be from other electrical loads.

For buildings with tenants, these systems shall be separately monitored for the total building and (excluding shared systems) for each individual tenant.

8.4.~~2~~3.2 Recording and Reporting. The electrical energy usage for all loads specified in 8.4.3.1 shall be recorded a minimum of every 15 minutes and reported at least hourly, daily, monthly, and annually. The data for each tenant space shall be made available to that tenant. The system shall be capable of maintaining all data collected for a minimum of 36 months.

Exceptions to 8.4.~~2~~3.1 and 8.4.~~2~~3.2:

a. Buildings ~~or additions~~ less than ~~10,000~~ 25,000 ft^2,
b. Individual tenant spaces less than ~~5,000~~ 10,000 ft^2,
c. *Dwelling units*.
d. Residential buildings with less than 10,000 ft^2 of common area.
e. Critical and Equipment branches of NEC Article 517
f. Hotels, motels, and restaurants

10.4 Mandatory Provisions:

10.4.4 Whole Building Energy Monitoring. Measurement devices shall be installed at the building site to monitor the energy usage of each new building.

10.4.4.1 Monitoring. Measurement devices shall be installed to monitor the building use of the following types of energy supplied by a utility, energy provider, or plant that is not within the building:

a. Natural Gas
b. Fuel Oil
c. Propane
d. Steam
e. Chilled Water
f. Hot Water

10.4.4.2 Recording and Reporting. The energy usage of each building on the building site shall be recorded at a minimum of every 60 minutes and reported at least hourly, daily, monthly, and annually. The system shall be capable of maintaining all data collected for a minimum of 36 months and creating user reports showing at least hourly, daily, monthly, and annual energy consumption and demand.

Exceptions to 10.4.4.1 and 10.4.4.2:

a. Building or additions less than 25,000 ft2.
b. Individual tenant spaces less than 10,000 ft2.
c. Dwelling units.
d. Residential buildings with less than 10,000 ft2 of common area.
e. Fuel used for on-site emergency equipment

Revise the Standard as follows (SI units):

8.4.3 Electrical Energy Monitoring

8.4.2~~2~~3.1 Monitoring. Measurement devices shall be installed in new buildings to monitor the electrical energy use for each of the following separately:

a. Total electrical energy.
b. HVAC Systems.
c. Interior lighting.
d. Exterior lighting.
e. Receptacle circuits.

Exceptions to 8.4.3.1: Up to 10% of the load for each of the categories b through e shall be allowed to be from other electrical loads.

For buildings with tenants, these systems shall be separately monitored for the total building and (excluding shared systems) for each individual tenant.

8.4.2~~2~~3.2 Recording and Reporting. The electrical energy usage for all loads specified in 8.4.3.1 shall be recorded a minimum of every 15 minutes and reported at least hourly, daily, monthly, and annually. The data for each tenant space shall be made available to that tenant. The system shall be capable of maintaining all data collected for a minimum of 36 months.

Exceptions to 8.4.2~~2~~3.1 and 8.4.2~~2~~3.2:

a. Buildings ~~or additions~~ less than ~~929~~ 2322 m^2
b. Individual tenant spaces less than ~~465~~ 929 m^2
c. *Dwelling units*.
d. Residential buildings with less than 929 m^2 of common area.
e. Critical and Equipment branches of NEC Article 517
f. Hotels, motels, and restaurants

10.4 Mandatory Provisions:

10.4.4 Whole Building Energy Monitoring. Measurement devices shall be installed at the building site to monitor the energy usage of each new building.

10.4.4.1 Monitoring. Measurement devices shall be installed to monitor the building use of the following types of energy supplied by a utility, energy provider, or plant that is not within the building:

a. Natural Gas
b. Fuel Oil
c. Propane
d. Steam
e. Chilled Water
f. Hot Water

10.4.4.2 Recording and Reporting. The energy usage of each building on the building site shall be recorded at a minimum of every 60 minutes and reported at least hourly, daily, monthly, and annually. The system shall be capable of maintaining all data collected for a minimum of 36 months and creating user reports showing at least hourly, daily, monthly, and annual energy consumption and demand.

Exceptions to 10.4.4.1 and 10.4.4.2:

a. Building or additions less than 2322 m^2.
b. Individual tenant spaces less than 929 m^2.
c. Dwelling units.
d. Residential buildings with less than 929 m^2 of common area.
e. Fuel used for on-site emergency equipment

BSR/ASHRAE/IES Addendum BO
to ANSI/ASHRAE/IES Standard 90.1-2010

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FOREWORD

This addendum modifies service water heating efficiency requirements in Standard 90.1 for Electric water heaters, Heat pump pool heaters, and Oil storage water heaters.

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 BO to 90.1-2010

Revise the Standard as follows

TABLE 7.8 Performance Requirements for Water Heating Equipment

Equipment Type	Size Category (Input)	Subcategory or Rating Condition	Performance Required[a]	Test Procedure[b,c]
Electric water heaters	≤12 kW	Resistance ≥20 gal	0.97–0.00132V EF	DOE 10 CFR Part 430
	>12 kW[e]	Resistance ≥20 gal	~~20 + 35 √V SL, Btu/h~~ 0.3 + 27/V_m, %/h	Section G.2 of ANSI Z21.10.3
	≤24 Amps and ≤250 Volts	Heat Pump	0.93–0.00132V EF	DOE 10 CFR Part 430
Gas storage water heaters	≤75,000 Btu/h	≥20 gal	0.67–0.0019V EF	DOE 10 CFR Part 430
	>75,000 Btu/h[f]	<4000 (Btu/h)/gal	80% E_t (Q/800 + 110 √V) SL, Btu/h	Section G.1 and G.2 of ANSI Z21.10.3
Gas instantaneous water heaters	>50,000 Btu/h and <200,000 Btu/h	≥4000 (Btu/h)/gal and <2 gal	0.62–0.0019V EF	DOE 10 CFR Part 430
	≥200,000 Btu/h[d,f]	≥4000 (Btu/h)/gal and <10 gal	80% E_t	Section G.1 and G.2 of ANSI Z21.10.3
	≥200,000 Btu/h[f]	≥4000 (Btu/h)/gal and ≥10 gal	80% E_t (Q/800 + 110 √V) SL, Btu/h	
Oil storage water heaters	≤105,000 Btu/h	≥20 gal	0.59–0.0019V EF	DOE 10 CFR Part 430
	>105,000 Btu/h	<4000 (Btu/h)/gal	~~78~~80% E_t (Q/800 + 110 √V) SL, Btu/h	Section G.1 and G.2 of ANSI Z21.10.3
Oil instantaneous water heaters	≤210,000 Btu/h	≥4000 (Btu/h)/gal and <2 gal	0.59–0.0019V EF	DOE 10 CFR Part 430
	>210,000 Btu/h	≥4000 (Btu/h)/gal and <10 gal	80% E_t	Section G.1 and G.2 of ANSI Z21.10.3
	>210,000 Btu/h	≥4000 (Btu/h)/gal and ≥10 gal	78% E_t (Q/800 + 110 √V) SL, Btu/h	
Hot-water supply boilers, gas and oil[f]	≥300,000 Btu/h and <12,500,000 Btu/h	≥4000 (Btu/h)/gal and <10 gal	80% E_t	Section G.1 and G.2 of ANSI Z21.10.3
Hot-water supply boilers, gas[f]		≥4000 (Btu/h)/gal and ≥10 gal	80% E_t (Q/800 + 110 √V) SL, Btu/h	
Hot-water supply boilers, oil		≥4000 (Btu/h)/gal and ≥10 gal	78% E_t (Q/800 + 110 √V) SL, Btu/h	
Pool heaters, oil and gas	All		78% E_t	ASHRAE 146
Heat pump pool heaters	All	~~50ºF db 44.2ºF wb Outdoor Air 80.0ºF Entering Water~~	4.0 COP	ASHRAE ~~1160~~146
Unfired storage tanks	All		R-12.5	(none)

[a] Energy factor (EF) and thermal *efficiency* (E_t) are minimum requirements, while standby loss (SL) is maximum Btu/h based on a 70°F temperature difference between stored water and ambient requirements. In the EF equation, V is the rated volume in gallons. In the SL equation, V is the rated volume in gallons and Q is the nameplate input rate in Btu/h.

[b] Section 12 contains a complete specification, including the year version, of the referenced test procedure.

[c] Section G.1 is titled "Test Method for Measuring Thermal Efficiency" and Section G.2 is titled "Test Method for Measuring Standby Loss."

[d] Instantaneous water heaters with input rates below 200,000 Btu/h must comply with these requirements if the water heater is designed to heat water to temperatures of 180°F or higher.

[e] Electric water heaters with input rates below 12kW must comply with these requirements if the water heater is designed to heat water to temperatures of 180°F or higher.

[f] Refer to Section 7.5.3 for additional requirements for gas storage and instantaneous water heaters and gas hot water supply boilers.

7.5.3 Buildings with High Capacity *Service Water Heating* Systems. For new buildings with gas service hot water systems with a total installed water heating input capacity of 1,000,000 Btuh or greater shall have commercial *service water heating* appliance(s) with a minimum Thermal Efficiency (E_t) of 90%. Where multiple commercial water heating appliances are used to meet this requirement, water heating input provided by appliances with Thermal Efficiency (E_t) above and below 90% must provide a minimum input capacity-weighted average efficiency of 90%.

Exception: Where 25% of the annual *service water heating* requirement is provided by *site-solar* or *site-recovered energy*.

The requirements of 7.5.3 are effective on (two years after the ASHRAE BOD vote to approve publication of the 90.1 standard containing this exception.)

BSR/ASHRAE/IES Addendum BP
to ANSI/ASHRAE/IES Standard 90.1-2010

Public Review Draft

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

First Public Review (August 2012)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

Evaporatively cooled heat rejection devices are key components of the most efficient refrigeration and HVAC systems on the market. Currently, the minimum efficiencies for both open and closed circuit cooling towers are listed in Standard 90.1-2010. This Addendum proposes to add minimum efficiencies for evaporative condensers used in ammonia based refrigeration systems. Evaporative condensers are utilized in cold storage warehouses, food processing facilities, supermarkets, industrial processes, and, to a limited extent, HVAC systems. Besides being energy efficient heat rejection devices, evaporative condensers increase the energy efficiency of the entire refrigeration system by enabling a much lower condensing temperature, and thus lower compressor lift, as compared to air cooled designs.

The minimum efficiency levels for both axial fan and centrifugal fan units established in this proposal are intended to eliminate an estimated 5% of the least efficient models from the market place for ammonia systems (note that the majority of evaporative condensers are used on ammonia systems). This change will signal stakeholders in these industries of the new requirements as well as encourage manufacturers to develop more energy efficient designs in the future. Efforts underway in the industry to foster an independent, third party certification program for evaporative condensers, which has proven extremely successful for both open and closed circuit cooling towers, would also be supported. In addition, the evaporative condenser manufacturers have spent substantial capital for the construction and operation of dedicated refrigeration laboratories that can test full-scale condensers in support of this certification effort as well as the development of innovative new designs.

As part of this Addendum, the Cooling Technology Institute (CTI) Acceptance Test Code for Mechanical Draft Evaporative Vapor Condensers has been added to Section 12 - Normative References. Though not associated directly with the addition of evaporative condensers to Table 6.8.1G, CTI ATC-105S (2011), the Acceptance Test Code for Closed Circuit Cooling Towers, and CTI STD-201 (2011), the CTI Standard for Thermal Performance Certification of Evaporative Heat Transfer Equipment, were also reviewed, found to be still relevant to Standard 90.1, and the revision dates have been updated appropriately in Section 12.

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BSR/ASHRAE/IES Addendum BP to ANSI/ASHRAE/IESNA Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
First Public Review Draft

Addendum BP to 90.1-2010

Revise the Standard as follows (I-P units):

TABLE 6.8.1G Performance Requirements for Heat Rejection Equipment

Equipment Type	Total System Heat Rejection Capacity at Rated Conditions	Subcategory or Rating Condition	Performance Required[a,b,c,d] f	Test Procedure[e]
Propeller or axial fan open-circuit cooling towers	All	95°F entering water 85°F leaving water 75°F *entering wb*	≥38.2 gpm/hp	CTI ATC-105 and CTI STD-201
Centrifugal fan open-circuit cooling towers	All	95°F entering water 85°F leaving water 75°F *entering wb*	≥20.0 gpm/hp	CTI ATC-105 and CTI STD-201
Propeller or axial fan closed-circuit cooling towers	All	102°F entering water 90°F leaving water 75°F *entering wb*	≥14.0 gpm/hp	CTI ATC-105S and CTI STD-201
Centrifugal closed-circuit cooling towers	All	102°F entering water 90°F leaving water 75°F *entering wb*	≥7.0 gpm/hp	CTI ATC-105S and CTI STD-201
Propeller or axial fan evaporative condensers	All	Ammonia test fluid 140°F entering gas temperature 96.3°F condensing temperature 75°F *entering wb*	≥ 134,000 Btu/h·hp	CTI ATC-106
Centrifugal fan evaporative condensers	All	Ammonia test fluid 140°F entering gas temperature 96.3°F condensing temperature 75°F *entering wb*	≥ 110,000 Btu/h·hp	CTI ATC-106
Air-cooled condensers	All	125°F condensing temperature ~~R-22 test fluid~~ 190°F entering gas temperature 15°F subcooling 95°F *entering db*	≥176,000 Btu/h·hp	AHRI 460

[a] For purposes of this table, *open-circuit cooling tower* performance is defined as the water flow rating of the tower at the thermal rating condition listed in Table 6.8.1G divided by the fan motor nameplate power.
[b] For purposes of this table, *closed-circuit cooling tower performance* is defined as the process water flow rating of the tower at the thermal rating condition listed in Table 6.8.1G divided by the sum of the fan motor nameplate power and the integral spray pump motor nameplate power.
[c] For purposes of this table, *air-cooled condenser performance* is defined as the heat rejected from the refrigerant divided by the fan motor nameplate power.
[d] Section 12 contains a complete specification of the referenced test procedure, including the referenced year version of the test procedure.
[e] The efficiencies and test procedures for both *open-* and *closed-circuit cooling towers* are not applicable to hybrid cooling towers that contain a combination of separate wet and dry heat exchange sections.

f For purposes of this table, evaporative condenser performance is defined as the heat rejected at the specified rating condition in the table divided by the sum of the fan motor nameplate horsepower and the integral spray pump nameplate horsepower.

The remainder of this table is not changed by this addendum.

Revise the Standard as follows (S-I units):

TABLE 6.8.1G Performance Requirements for Heat Rejection Equipment

Equipment Type	Total System Heat Rejection Capacity at Rated Conditions	Subcategory or Rating Condition	Performance Required[a,b,c,d] f	Test Procedure[e]
Propeller or axial fan open-circuit cooling towers	All	35.0°C entering water 29.4°C leaving water 23.9°C *entering wb*	≥3.23 L/s·kW	CTI ATC-105 and CTI STD-201
Centrifugal fan open-circuit cooling towers	All	35.0°C entering water 29.4°C leaving water 23.9°C *entering wb*	≥1.7 L/s·kW	CTI ATC-105 and CTI STD-201
Propeller or axial fan closed-circuit cooling towers	All	38.9°C entering water 32.2°C leaving water 23.9°C *entering wb*	≥1.18 L/s·kW	CTI ATC-105S and CTI STD-201
Centrifugal closed-circuit cooling towers	All	38.9°C entering water 32.2°C leaving water 23.9°C *entering wb*	≥0.59 L/s·kW	CTI ATC-105S and CTI STD-201
Propeller or axial fan evaporative condensers	All	Ammonia test fluid 60°C entering gas temperature 35.7°C condensing temperature 23.9°C *entering wb*	≥ 52.6 COP	CTI ATC-106
Centrifugal fan evaporative condensers	All	Ammonia test fluid 60°C entering gas temperature 35.7°C condensing temperature 23.9°F *entering wb*	≥ 43.2 COP	CTI ATC-106
Air-cooled condensers	All	52°C condensing temperature ~~R-22 test fluid~~ 88°C entering gas temperature 8°C subcooling 35°C *entering db*	≥69 COP	AHRI 460

[a] For purposes of this table, *open-circuit cooling tower* performance is defined as the water flow rating of the tower at the thermal rating condition listed in Table 6.8.1G divided by the fan motor nameplate power.
[b] For purposes of this table, *closed-circuit cooling tower performance* is defined as the process water flow rating of the tower at the thermal rating condition listed in Table 6.8.1G divided by the sum of the fan motor nameplate power and the integral spray pump motor nameplate power.
[c] For purposes of this table, *air-cooled condenser performance* is defined as the heat rejected from the refrigerant divided by the fan motor nameplate power.
[d] Section 12 contains a complete specification of the referenced test procedure, including the referenced year version of the test procedure.
[e] The efficiencies and test procedures for both *open-* and *closed-circuit cooling towers* are not applicable to hybrid cooling towers that contain a combination of separate wet and dry heat exchange sections.

[f] For purposes of this table, evaporative condenser performance is defined as the heat rejected at the specified rating condition in the table divided by the sum of the fan motor nameplate power and the integral spray pump nameplate power.

Add ATC-106 to the Normative Reference Section of the standard, as well as update the revision dates for the other CTI standards (SI and IP Units)

12. NORMATIVE REFERENCES

Cooling Technology Institute,
2611 FM 1960 West, Suite A-101, Houston, TX 77068-3730; P.O. Box 73383, Houston, TX 77273-3383

CTI ATC-105 (00)	Acceptance Test Code for Water Cooling Towers
CTI ATC-105S (~~96~~ 11)	Acceptance Test Code for Closed-Circuit Cooling Towers
CTI ATC-106 (11)	Acceptance Test Code for Mechanical Draft Evaporative Vapor Condensers
CTI STD-201 (~~09~~ 11)	Standard for Thermal Performance Certification of Evaporative Heat Transfer Equipment

BSR/ASHRAE/IES Addendum BQ
to ANSI/ASHRAE/IES Standard 90.1-2010

Public Review Draft

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

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FOREWORD

This proposal adds mechanical and lighting efficiency requirements for refrigerator freezer display cases.

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Addendum BQ to 90.1-2010

Revise the Standard as follows

3.2 Definitions

bubble point: the refrigerant liquid saturation temperature at a specified pressure.

refrigerant dew point; the refrigerant vapor saturation temperature at a specified pressure.

low temperature refrigeration system: systems for maintaining food product in ~~a~~ its frozen state in refrigeration applications.

medium temperature refrigeration systems: systems for maintaining food product above its ~~freezing~~ frozen state in refrigeration applications.

3.3 Abbreviations and Acronyms

HVACR heating, ventilating, air conditioning, and refrigeration

6. HEATING, VENTILATING, AIR CONDITIONING AND REFRIGERATION

6.1.1.1 New Buildings. Mechanical equipment and systems serving the heating, cooling, ventilating, or refrigeration needs of new buildings shall comply with the requirements of this section as described in Section 6.2.

6.1.1.2 Additions to Existing Buildings. Mechanical equipment and systems serving the heating, cooling, ventilating, or refrigeration needs of additions to existing buildings shall comply with the requirements of this section as described in Section 6.2.

Exception: When HVACR to an addition is provided by existing HVACR systems and equipment, such existing

systems and equipment shall not be required to comply with this standard. However, any new systems or equipment installed must comply with specific requirements applicable to those systems and equipment.

6.1.1.3 Alterations to Heating, Ventilating, Air Conditioning, and Refrigeration in Existing Buildings

6.1.1.3.1 New HVACR equipment as a direct replacement of existing HVACR equipment shall comply with the specific minimum efficiency requirements applicable to that equipment.

6.2.1 Compliance with Section 6 shall be achieved by meeting all requirements for Section 6.1, General; Section 6.7, Submittals; Section 6.8, Minimum Equipment Efficiency; and either:

a. Section 6.3, Simplified Approach Option for HVACR Systems;

or

b. Section 6.4, Mandatory Provisions; and Section 6.5, Prescriptive Path.

6.4.5 *Walk-in Coolers* and *Freezers*. Site constructed or site assembled *walk-in coolers* and *freezers* shall conform to the following requirements:

a. Shall be equipped with automatic door closers that firmly close walk-in doors that have been closed to within 1 inch of full closure.

   EXCEPTION: Doors wider than 3 feet 9 inches or taller than 7 feet.

b. Doorways shall have strip doors (curtains), spring-hinged doors, or other method of minimizing infiltration when doors are open.

c. *Walk-in coolers* shall contain wall, ceiling, and door insulation of at least R–25 and *walk-in freezers* at least R–32.

   EXCEPTION: glazed portions of doors or structural members.

d. *Walk-in freezers* shall contain floor insulation of at least R–28.

e. Evaporator fan motors that are less than 1 horsepower and less than 460 volts shall use electronically commutated motors (brushless direct current motors) or 3-phase motors.

f. Lights shall use light sources with an efficacy of 40 lumens per Watt or more, including ballast losses (if any). Light sources with an efficacy of less than 40 lumens per Watt, including ballast losses (if any), may be used in conjunction with a timer or device that turns off the lights within 15 minutes of when the *walk-in cooler* or *walk-in freezer* is not occupied by people.

g. Transparent reach-in doors for *walk-in freezers* and windows in *walk-in freezer* doors shall be of triple-pane glass, either filled with inert gas or with heat-reflective treated glass.

h. Transparent reach-in doors for *walk-in coolers* and windows in *walk-in cooler* doors shall be double-pane glass with heat-reflective treated glass and gas filled; or triple-pane glass, either filled with inert gas filled or with heat-reflective treated glass.

i. Anti-sweat heaters without anti-sweat heater controls shall have a total door rail, glass, and frame heater power draw of less than or equal to 7.1 Watts per square foot of door opening for *walk-in freezers*, and 3.0 Watts per square foot of door opening for *walk-in coolers*.

j. Anti-sweat heater controls shall reduce the energy use of the anti-sweat heater as a function of the relative humidity in the air outside the door or to the condensation on the inner glass pane.

k. Condenser fan motors that are less than 1 horsepower shall use electronically commutated motors, permanent split capacitor-type motors or 3-phase motors.

l. All walk-in freezers shall incorporate temperature based defrost termination control with a time limit default. The defrost cycle shall terminate first on an upper temperature limit breach and second upon a time limit breach.

Exception: Walk-in coolers and walk-in freezers combined in a single enclosure greater than 3,000 square feet.

6.4.6 Refrigerated Display Case

a. All refrigerated display cases shall conform to 6.4.1.1 Minimum Equipment Efficiencies, Tables 6.8.1A through 6.8.1M.

b. Lighting in refrigerated display cases and glass doors installed on walk-in coolers and freezers shall be controlled by one of the following;

   i. Automatic time switch controls to turn off lights during non-business hours. Timed overrides for display cases or walk-in coolers and freezers may be used to turn the lights on for up to one hour and shall automatically time out to turn the lights off.

   ii. Motion sensor controls on each display case or walk-in door section that reduce lighting power by at least 50 percent within 3 minutes after the area within the sensor range is vacated.

c. All low temperature display cases shall incorporate temperature based defrost termination control with a time limit default. The defrost cycle shall terminate first on an upper temperature limit breach and second upon a time limit breach.

d. Anti-sweat heater controls shall reduce the energy use of the anti-sweat heater as a function of the relative humidity in the air outside the door or to the condensation on the inner glass pane.

6.5.10 Refrigeration Systems. Refrigeration systems that are comprised of refrigerated display cases, *walk-in coolers* or *walk-in freezers* connected to remote compressors, ~~and~~ remote condensers or remote condensing units~~, not in a *condensing unit*~~, shall meet the requirements of section 6.5.10.1 through 6.5.10.2.

Exception: Systems utilizing transcritical refrigeration cycle or Ammonia refrigerant.

6.5.10.1 Condensers Serving Refrigeration Systems. Fan-powered condensers shall conform to the following requirements:

a. Design *saturated condensing temperatures* for air-cooled condensers shall be less than or equal to the design drybulb temperature plus 10°F for *low temperature refrigeration* s*ystems*, and less than or equal to the design drybulb temperature plus 15°F for *medium temperature refrigeration* s*ystems*.

i. *Saturated condensing temperature* for blend refrigerants shall be determined using the average of liquid and vapor temperatures as converted from the condenser drain pressure.

b. Condenser fan motors that are less than 1 horsepower shall use electronically commutated motors, permanent split capacitor-type motors or 3-phase motors.

c. All condenser fans for air-cooled condensers, evaporatively cooled condensers, air or water cooled fluid coolers or cooling towers shall incorporate one of the following continuous variable speed fan control approaches and shall reduce fan motor demand to no more than 30% of design wattage at 50% of design air volume.

i. Refrigeration system condenser control for air-cooled condensers shall use variable setpoint control logic to reset the condensing temperature setpoint in response to ambient drybulb temperature.

ii. Refrigeration system condenser control for evaporatively cooled condensers shall use variable setpoint control logic to reset the condensing temperature setpoint in response to ambient wetbulb temperature.

d. Multiple fan condensers shall be controlled in unison.

e. The minimum condensing temperature setpoint shall be no greater than 70˚F.

6.5.10.2 ~~Refrigeration System Design~~ Compressor Systems. Refrigeration compressor systems shall conform to the following requirements. ~~be designed for minimum *saturated condensing temperature* set point less than or equal to 70°F~~.

a. Compressors and multiple-compressor systems suction groups shall include control systems that use floating suction pressure control logic to reset the target suction pressure temperature based on the temperature requirements of the attached refrigeration display cases or walk-ins.

Exceptions:

i. Single compressor systems that do not have variable capacity capability.

ii. Suction groups that have a design saturated suction temperature of 30˚F or higher, suction groups that comprise the high stage of a two-stage or cascade system or suction groups that primarily serve chillers for secondary cooling fluids.

b. Liquid sub-cooling shall be provided for all low temperature compressor systems with a design cooling capacity equal to or greater than 100,000 Btu/hr with a design saturated suction temperature of -10˚F or lower. The sub-cooled liquid temperature shall be controlled at a maximum temperature setpoint t of 50˚F at the exit of the sub-cooler using either compressor economizer (inter-stage) ports or a separate compressor suction group operating at a saturated suction temperature of 18˚F or higher.

i. Sub-cooled liquid lines are subject to the insulation requirements of Table 6.8.3B.

c. All compressors that incorporate internal or external crankcase heaters shall provide a means to cycle the heaters off during compressor operation.

BSR/ASHRAE/IES Addendum BT
to ANSI/ASHRAE/IES Standard 90.1-2010

Public Review Draft

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FOREWORD

This proposed addendum revises the requirements for the use of exhaust air energy recovery as defined in table 6.5.6.1

The current table requires energy recovery as a function of the percent outdoor air and design supply fan airflow. The current table defines requirements for energy recover for outdoor air ventilation rates above 30%. Many buildings operate with ventilation rates below 30%. Typical buildings in this category include offices, motels, hotels, grocery, and warehouses which represent a significant part of the market. Therefore by extending the table down we can save additional energy on these buildings where economically justified. Using the tool developed for the ASHRAE 90.1 2010 table development we ran full 8760 hr simulation runs for building office, school and retail applications down to 10% outdoor air and then selected least restrictive cfm values for the table based on the 2010 scalar using a design life of 15 years. This results in additional requirements for energy recovery on larger systems in zones 1A, 2A, 3A, 4A, 5A, 6A, 7 and 8. These zones represent 30.8% of the market.

In addition to the changes to extend the table down low percent outdoor air ventilation rates, we also propose to modify the requirements for zone 3B, 3C, 4B, 4C and 5B as they are not economical justified and have scalar values of 20.3 yrs up to infinity. They were set a 5,000 cfm when the table was revised for the 2010 ASHRAE 90.1 standard, because the 5000 cfm was the value that was in the 2007 standard for energy recovery use. We have received feedback that other studies have also confirmed that these values are not cost effective and it is felt these values need to be corrected.
This proposed addendum revises the requirements for the use of exhaust air energy recovery as defined in table 6.5.6.1

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Addendum BT to 90.1-2010

Revise the Standard as follows (IP units)

Table 6.5.6.1 Energy Recovery Requirement

Zone	% *Outdoor Air* at Full Design Airflow Rate							
	≥10% and <20%	≥20% and <30%	≥30% and <40%	≥40% and <50%	≥50% and <60%	≥60% and <70%	≥70% and <80%	≥80%
	Design Supply Fan Airflow Rate (cfm)							
3B, 3C, 4B, 4C, 5B	NR	NR	NR	NR	NR	NR	≥5000NR	≥5000NR
1B, 2B,5C	NR	NR	NR	NR	≥26000	≥12000	≥5000	≥4000
6B	≥28000	≥26500	≥11000	≥5500	≥4500	≥3500	≥2500	≥1500
1A, 2A, 3A, 4A, 5A, 6A	≥26000	≥16000	≥5500	≥4500	≥3500	≥2000	≥1000	≥0
7,8	≥4500	≥4000	≥2500	≥1000	≥0	≥0	≥0	≥0

NR – Not required

Revise the Standard as follows (SI units)

BSR/ASHRAE/IES Addendum BU
to ANSI/ASHRAE/IES Standard 90.1-2010

Public Review Draft

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

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FOREWORD

This addendum adds an exception to using waterside economizers. The Recommended Range for Class 1 & 2 Data Centers published by TC9.9 in the Thermal Guidelines Book indicates a lower bound of 42F DP. Uptime Institute and TIA942 Tier II through IV Data Center designs are required to be humidified. The combination of these elements means that any Data Centers design complying with these industry guidelines and standards must use waterside economizers under the current wording. This requirement is forcing the use of waterside economizers, since the requirements for economizers and systems trigger at 50 tons and 250 tons. Eliminating DX equipment in data centers is an overly burdensome restriction to impose on the industry and eliminates greater than 50% of the equipment applications used in data centers today, virtually destroying several manufacturers of CRACs and CRAHs. The current requirement is not supported by appropriate cost justification and there is nothing to suggest that air-cooled systems using adiabatic forms of humidification, or indirect airside economizers are less energy efficient.

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Addendum BI to 90.1-2010

Revise the Standard as follows

6.5.2.4 Humidification. Systems with hydronic cooling and humidification systems designed to maintain inside humidity at a dew-point temperature greater than 35°F shall use one of the following ~~a water economizer~~ if an economizer is required by Section 6.5.1.

a. an air economizer with adiabatic humidification;
b. a water economizer; or
c. an indirect airside economizer with a minimum effectiveness of 50% as defined by Section 6.5.6.1.

Exception: Where steam humidification is required by applicable codes or accreditation standards.

BSR/ASHRAE/IES Addendum BV
to ANSI/ASHRAE/IES Standard 90.1-2010

Public Review Draft

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

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FOREWORD

This revision of the toplighting requirements reduces the space area threshold, adds single-story buildings, and expands the list of spaces where daylight would not adversely affect operation of the space (such as a movie theater seating area where daylight is not appropriate). The new requirements were part of the 50pct Concept Analysis that PNNL completed in Fall 2011.

The existing requirement states that in enclosed spaces larger than 5,000 ft^2 and with ceiling heights greater than 15 ft, a minimum skylight fenestration area must be provided. The proposal is to reduce the enclosed space area threshold from 5,000 ft^2 to 2,500 ft^2. This would bring in a lot more high-ceiling spaces and spaces in single-story buildings that were previously not required to install skylights.

PNNL analyzed the energy savings from this measure using the Standalone Retail prototype model. The energy consumption was reduced on an average across climate zones 1 through 6 by 1.1% or 6,660 kWh annually. The cost-effectiveness of the reduced threshold was also analyzed. Costs for skylights were gathered from online sources, installation, labor costs were obtained from RS Means and photocontrol costs are from HMG. Using a cost-weighted measure life approach, it was found that the reducing the space area threshold for skylights is cost-effective.

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Addendum BV to 90.1-2010

Revise the Standard as follows

5.5.4.2.3 Minimum Skylight Fenestration Area. In any enclosed space in a building ~~that is four stories or less and~~ that is:

a. ~~5,000ft²~~ **2,500** ft² (~~465~~ 232 m2) and greater and,

b. Directly under a roof with a ceiling heights greater than 15 ft and,

c. One of the following space types: office, lobby, atrium, concourse, corridor, storage (including nonrefrigerated warehouse), gymnasium, fitness/exercise area, **playing area, gymnasium seating** area, convention exhibit/event space, courtroom, automotive service, fire station engine room, manufacturing corridor/transition and bay areas, retail, **library reading and stack areas**, distribution/sorting area, transportation baggage and seating areas, or workshop,

the total daylight area under skylights shall be a minimum of half the floor area and either:

d. provide a minimum skylight area to daylight area under skylights of 3% with a skylight VT of at least 0.40 or

e. provide a minimum skylight effective aperture of at least 1%.

These skylights shall have a glazing material or diffuser with a measured haze value greater than 90% when tested in accordance with ASTM D1003. General lighting in the daylight area shall be controlled as described in Section 9.4.1.5.

Exceptions to 5.5.4.2.3

a. Enclosed spaces in climate zones 6 through 8.

~~b. Enclosed spaces with designed general lighting power densities less than 0.5~~ 0.4 W/ft^2~~.~~

~~a.~~ b. Enclosed spaces where it is documented that existing structures or natural objects block direct beam sunlight on at least half of the roof over the enclosed space for more than 1500 daytime hours per year between 8 a.m. and 4 p.m.

~~b.~~ c. Enclosed spaces where the daylight area under rooftop monitors is greater than 50% of the enclosed space floor area.

~~c.~~ d. Enclosed spaces where it is documented that 90% of the skylight area is shaded on June 21 in the Northern Hemisphere (December 21 in the Southern Hemisphere) at noon by permanent architectural features of the building.

~~d. *Primary sidelighted areas* with a *sidelighting effective apertures* greater than 0.15 where the lighting is controlled according to sidelighting requirements described in Section 9.4.1.4.~~

~~e. *Secondary sidelighted areas* with a *sidelighting effective aperture* greater than 0.30 where the lighting is controlled according to sidelighting requirements described in Section 9.4.1.4.~~

e. Enclosed spaces where the total area minus the *primary* and *secondary sidelighted area(s)* is less than 2,500 sq ft (232 m2), and where the lighting is controlled according to sidelighting requirements described in Section 9.4.1.4..

BSR/ASHRAE/IES Addendum BW
to ANSI/ASHRAE/IES Standard 90.1-2010

Public Review Draft

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

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FOREWORD

This revision to the building/fenestration orientation requirements provides more specific requirements for east and west facing fenestration while also providing more flexibility for complying. Analyses indicate that east and west facing fenestration increases building energy consumption compared to north and south facing glazing in all climates. The criteria can be met by limiting fenestration area, changing the fenestration SHGC, or orienting the building so that the long axis is in the east-west direction. A number of exceptions are provided. New exceptions include one for buildings with less than 20% fenestration on the east and west facades and one for buildings in Climate Zone 8. The definitions for the areas east and west oriented fenestration have also been further refined.

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Addendum BW to 90.1-2010

Revise the Standard as follows (IP and SI Units)

5.5.4.5 Fenestration Orientation. The *vertical fenestration* ~~*area*~~ shall comply with either (a) or (b) ~~meet the following requirement~~:

~~$A_S \geq A_W$ and $A_S \geq A_E$~~

(a.) $A_W \leq (A_F)/4$ and $A_E \leq (A_F)/4$

(b.) $A_W \times SHGC_W \leq (A_F \times SHGC_C)/4$ and $A_E \times SHGC_E \leq (A_F \times SHGC_C)/4$

where

~~A_s = south oriented *vertical fenestration area* (oriented less than or equal to 45 degrees of true south)~~

~~A_n = north oriented *vertical fenestration area* (oriented less than or equal to 45 degrees of true north)~~

A_w = west oriented *vertical fenestration area* (oriented within ~~less than 30~~ 45 degrees of true west to the south and within 22.5 degrees of true west to the north in the northern hemisphere; oriented

within 45 degrees of true west to the north and within 22.5 degrees of true west to the south in the southern hemisphere)

A_e = east oriented *vertical fenestration area* (oriented within ~~less than 30~~ 45 degrees of true east to the south and within 22.5 degrees of true east to the north in the northern hemisphere; oriented within 45 degrees of true east to the north and within 22.5 degrees of true east to the south in the southern hemisphere)

A_T = total *vertical fenestration area*

$SHGC_C$ = the *SHGC* criteria in Tables 5.5-1 through 5.5-8 for each climate zone

$SHGC_E$ = the *SHGC* for east-oriented *fenestration* that complies with 5.5.4.4.1

$SHGC_W$ = the *SHGC* for west-oriented *fenestration* that complies with 5.5.4.4.1

~~In the southern hemisphere, replace *As* with *An* in the formulae above.~~

Exceptions to 5.5.4.5:

a. *Vertical fenestration* that complies with the exception to 5.5.4.4.1 (c).

b. Buildings that have an existing building or existing permanent infrastructure within 20 ft (6 m) to the south (north in the southern hemisphere) which is at least half as tall as the proposed building.

c. Buildings with shade on 75% of the west and east oriented *vertical fenestration* areas from permanent projections, existing buildings, existing permanent infrastructure, or topography at 9 a.m. and 3 p.m. on the summer solstice (June 21 in the northern hemisphere).

d. *Alterations* and *additions* with no increase in *vertical fenestration area*.

e. Buildings where the west oriented and east oriented *vertical fenestration area* (as defined in 5.5.4.5) does not exceed 20% of the *gross wall area* for each of those façades and *SHGC* on those facades is no greater than 90% of the criteria in Tables 5.5-1 through 5.5-8.

f. Buildings in Climate Zone 8.

Revise Table 11.3.1(5) as follows:

If the *vertical fenestration area* facing west or east of the proposed building exceeds the area limit set in Section 5.5.4.5, ~~the area shall be reduced proportionally until the area is the same as the area limit set in Section 5.5.4.5. The area limit is the *fenestration area* facing south in the northern hemisphere or the *fenestration area* facing north in the southern hemisphere as defined in Section 5.5.4.5.~~ then the *energy cost budget* shall be generated by simulating the *budget building design* with its actual *orientation* and again after rotating the entire *budget building design* 90, 180, and 270 degrees, then averaging the results.

BSR/ASHRAE/IES Addendum BX
to ANSI/ASHRAE/IES Standard 90.1-2010

Public Review Draft

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

First Public Review (August 2012)
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FOREWORD

The purpose of this proposal is to remove confusion about how the exceptions to the occupancy sensor requirement work and to eliminate one of those exceptions since technology changes make that exception no longer needed.

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Addendum BX to 90.1-2010

Revise the Standard as follows(IP and SI Units)

Exceptions to 9.4.1.2b: ~~These spaces are not required to be connected to other *automatic* lighting shutoff controls:~~

~~a. Spaces with *multi-scene control* systems,~~
~~b~~a. shop and laboratory classrooms,
~~c~~b. spaces where an *automatic shutoff* would endanger the safety or security of the room or building occupant(s), and
~~d~~c. Spaces where lighting is required for 24-hour operation.

20XX

ASME B16.9-~~2007~~

(Revision of ASME B16.9-~~2007~~)

2007

Proposed Revision of:

Factory-Made Wrought Buttwelding Fittings

DRAFT 08/3/12

AN AMERICAN NATIONAL STANDARD

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The proof test shall be on based on the computed burst pressure of the fitting and its connecting piping as defined in para. 9.3. A factory-made segmented elbow (see para. 6.2.4) that has a proof test on a geometrically similar 90° elbow need not be tested separately.

the fittings or the overall dimensions. Dimensional requirements for these fittings are to be found in Tables 1 through 11 and Tables I-1 through I-11 of Mandatory Appendix I.

6.2 Special Dimensions

6.2.1 Fatigue Loading. For applications where fatigue loading is a concern, required minimum dimensions shall be furnished by the purchaser.

6.2.2 Bore Diameter. Bore diameters away from the ends are not specified. If special flow path requirements are needed, the bore dimensions shall be specified by the purchaser.

6.2.3 Stub Ends. Service conditions and joint construction often dictate stub end length requirements. Therefore, the purchaser must specify long or short pattern fitting when ordering. [See General Note (c) in Tables 9 and I-9.]

6.2.4 Segmental Elbows. Factory-made segments of short radius, long radius, and 3D radius elbows may be made to meet customer angle requirements. With the exception of the B dimension, factory-made segments of elbows shall meet all other requirements of this Standard. The B dimension for segmented elbows can be calculated as follows:

For segments of 90-deg elbows

$$B_s = A \times \tan(\theta/2)$$

where

A = dimension A for appropriate 90-deg elbow being segmented from
- *(a)* Table 1/Table I-1 for long radius elbow, mm (in.)
- *(b)* Table 4/Table I-4 for short radius elbow, mm (in.)
- *(c)* Table 6/Table I-6 for 3D elbow, mm (in.)

B_s = center-to-end dimension for segmented elbow

θ = angle of segmented elbow — 30 deg, 60 deg, 75 deg, etc.

When special elbows are intended for field segmenting, the outside or inside diameter tolerance shall be furnished throughout the fitting by agreement between the manufacturer and the purchaser. Any mismatch on the outside or inside diameter needs to be corrected in the field by grinding, back-welding, or bridging of weld to meet the applicable piping code requirements. Although the elbow intended for field-segmenting must meet the requirements of this Standard, once the field-segmented elbow is cut, it is not a B16.9 product.

7 SURFACE CONTOURS

Where adjacent openings in fittings are not in parallel planes, they shall be joined by a circular arc or radius on the external surfaces. The arc or radius may be terminated in tangents. Except as provided for block forgings (see section 5), the projected profile of external surfaces of fittings shall not have sharp intersections (corners) and/or collapsed arcs.

8 END PREPARATION

Unless otherwise specified, the details of the welding end preparation shall be in accordance with Table 12. Transitions from the welding bevel to the outside surface of the fitting and from the root face to the inside surface of the fitting lying within the maximum envelope shown in Fig. 1 are at the manufacturer's option, except as covered in Note (5) of Fig. 1 or unless otherwise specifically ordered.

9 DESIGN PROOF TEST

9.1 Required Tests

Proof tests shall be made as set forth in this Standard when the manufacturer chooses proof testing to qualify the fitting design. ~~Unless otherwise agreed upon between the manufacturer and purchaser, the proof test shall be one based on the computed bursting pressure of the fitting and its connecting piping.~~

Lap joint stub ends are exempt from proof testing because they are used in a flange assembly, which will have different ratings depending on service application.

9.2 Test Assembly

9.2.1 Representative Components. Fittings that are representative of production and selected for testing shall be identified as to material, grade, and lot, including heat treatment. They shall be inspected for dimensional compliance to this Standard.

9.2.2 Other Components. Straight seamless or welded pipe sections whose calculated bursting strength is at least as great as the proof test pressure as calculated in para. 9.3 shall be welded to each end of the fitting to be tested. ~~Any internal misalignment greater than 1.5 mm (0.06 in.) shall be reduced by taper boring at a slope not over 1:3.~~ Length of pipe sections for closures shall be as follows:

(a) Minimum length of pipe shall be one pipe O.D. for NPS 14 (DN 350) and smaller.

(b) Minimum length of pipe shall be one-half pipe O.D. for NPS greater than 14 (DN 350).

9.3 Test Procedure

The test ~~Test~~ fluid shall be water or other liquid ~~used for hydrostatic testing.~~ Hydrostatic pressure shall be applied to the assembly. ~~The test is successful if the fitting withstands, without rupture, a proof test pressure at least~~

Pipe sections may have the nominal wall greater than the thickness indicated by the fitting markings. That greater thickness shall not exceed 1.5 times the fitting markings wall. Any internal misalignment greater than 1.5mm (0.06in.) shall be reduced by taper boring at a slope not over 1:3. Any other unequal wall welding preparation shall be in accordance with B16.25.

materials provided the yield to tensile ratio as specified in the applicable specification of that material is 0.84 or less. Therefore, it is necessary to test only a single material in a representative fitting to prove the design of the fitting.

f = the testing factor from in-text table listed in para. 9.3

~~equal to the computed minimum proof test defined below.~~

$$P = \frac{2St}{D}f$$

where

D = specified outside diameter of pipe

P = computed minimum proof test pressure for fitting

S = actual tensile strength of the test fitting, determined on a specimen representative of the test fitting, which shall meet the tensile strength requirements of the applicable material of section 5

t = nominal pipe wall thickness of the pipe that the fitting marking identifies

NOTE: Any dimensionally consistent system of units may be used.

9.4 Applicability of Test Results

It is not necessary to conduct an individual test of fittings with all combinations of sizes, wall thicknesses, and materials. A successful proof test on one representative fitting may represent others to the extent described in paras. 9.4.1, 9.4.2, and 9.4.3.

9.4.1 Size Range. One test fitting may be used to qualify similarly proportioned fittings with a size range from one-half to twice that for the tested fitting. The test of a nonreducing fitting qualifies reducing fittings of the same pattern. The test of a reducing fitting qualifies reductions to smaller sizes.

9.4.2 Thickness Range. One test fitting may be used to qualify similarly proportioned fittings with t/D ranges from one-half to three times that for the tested fitting.

9.4.3 Material Grades. The pressure retaining capacity of a geometrically identical fitting made of various grades of steel will be directly proportional to the tensile properties of the ~~various grades; see para. 2.1. Therefore, it is necessary to test only a single material grade in a representative fitting to prove the design of the fitting.~~

10 PRODUCTION TESTS

Hydrostatic testing of wrought fittings is not required by this Standard. All fittings shall be capable of withstanding, without leakage or impairment of serviceability, a hydrostatic test pressure required by the applicable piping code for seamless pipe of material equivalent to the fitting material, and of the size and wall thickness the fitting marking identifies.

11 TOLERANCES

Tolerances for fittings are shown in Tables 13 and I-12, and apply to the nominal dimensions given in Tables 1 through 11 and Tables I-1 through I-11. Where given in the tables, the minimum and maximum dimensions are based on these tolerances. The listings with decimals do not imply precision measurement, such as use of vernier, micrometer, electronic readout equipment, etc.

At least 3 specimen tests for each fitting or joint size or configuration are recommended. The testing factor, f, based on the number of specimen tests performed in the table below is used in the computed test equations.

Number of tests	Testing factor, f
1	1.10
2	1.05
3	1.00

General note: Tests of geometrically identical fittings that meet the requirements specified in para. 9.4 may be combined to establish the test factor applied to a set of fittings.

The test shall be taken to rupture to held at or above the computed minimum proof pressure for a period of at least 3 minutes. The test is successful if each of the tests the fitting withstands, without rupture, a proof test pressure at least equal to the computed minimum

9.5 Maintenance of Results

The manufacturer shall have a quality control (QC) program that verifies the manufacturing process used and assures that the resulting geometry of the fittings or joints manufactured reasonably conforms to the geometries tested. The QC program shall control the manufacturing drawings and maintain QC records showing conformance to these drawings.

Tests made in accordance with and at the time of prior editions of this test are not intended to be nullified by the changes made in this edition's test procedure and requirement.

Whenever a significant change is made in the geometry or method of manufacture, the manufacturer shall either retest the new production or show by analysis that the change would not affect the results of the prior tests.

9.6 Proof Test Report

A report of the testing for each joint configuration shall be prepared and shall include:
(a) a description of the test, including the number of tests and f factor used to establish the target proof test
(b) the instrumentation and methods of calibrations used
(c) material test reports for the assembly's materials
(d) the actual final pressures for each test
(e) the length of time from test initiation to the time of burst, or the hold time at or above the computed target pressure
(f) calculations performed
(g) the location of rupture, if any, including a sketch
(h) certification by a registered Professional Engineer experienced in pressure component design or a licensed Authorized Inspector

The test report shall be made available at the manufacturer's facility for inspection by the purchaser or regulatory authority.

MANDATORY APPENDIX II
REFERENCES

The following is a list of standards and specifications referenced in this Standard.

ASME B16.5-2003, Pipe Flanges and Flanged Fittings NPS ½ Through NPS 24 Metric/Inch Standard

ASME B16.25-2003, Buttwelding Ends

ASME B16.49-2000, Factory-Made Wrought Steel Buttwelding Induction Bends for Transportation and Distribution Systems

ASME B31, Code for Pressure Piping

ASME B36.10M-2004, Welded and Seamless Wrought Steel Pipes

ASME B36.19M-2004, Stainless Steel Pipe

ASME BPVC-2004, ASME Boiler and Pressure Vessel Code

Publisher: The American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016-5990; Order Department: 22 Law Drive, P.O. Box 2300, Fairfield, NJ 07007-2300

ASTM A 234/A 234M-06, Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service

ASTM A 403/A 403M-06, Standard Specification for Wrought Austenitic Stainless Steel Piping Fittings

ASTM A 420/A 420M-06, Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Low-Temperature Service

ASTM A 815/A 815M-04, Standard Specification for Wrought Ferritic, Ferritic/Austenitic and Martensitic Stainless Steel Piping Fittings

ASTM A 960/A 960M-06, Specification for Common Requirements for Wrought Steel Piping Fittings

ASTM B 361-02, Standard Specification for Factory-Made Wrought Aluminum and Aluminum-Alloy Welding Fittings

ASTM B 363-06a, Standard Specification for Seamless and Welded Unalloyed Titanium and Titanium Alloy Welding Fittings

ASTM B 366-04b, Standard Specification for Factory-Made Wrought Nickel and Nickel Alloy Fittings

ASTM E 29-06, Standard Practice for Using Significant Digits in Test Data to Determine Conformance With Specifications

Publisher: ASTM International (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959

ISO 6708:1995, Pipework components — Definition and selection of DN (nominal size)

ISO 9000:2000, Quality management systems — Fundamentals and vocabulary

ISO 9001:2000, Quality management systems — Requirements

ISO 9004:2000, Quality management systems — Guidelines for performance improvements

Publisher: International Organization for Standardization (ISO), 1 ch. de la Voie-Creuse, Case Postale 56, CH-1211, Genève 20, Switzerland/Suisse

Editor's Note:
Please refer to Attachment B for new References

Attachment B – Mandatory Appendix II

MANDATORY APPENDIX II
REFERENCES

The following is a list of standards and specifications referenced in this Standard. Unless otherwise specified, the latest edition of ASME publications shall apply.

ASME B16.5, Pipe Flanges and Flanged Fittings NPS ½ Through NPS 24 Metric/Inch Standard
ASME B16.25, Buttwelding Ends
ASME B16.49, Factory-Made Wrought Steel Buttwelding Induction Bends for Transportation and Distribution Systems
ASME B31, Code for Pressure Piping
ASME B36.lOM, Welded and Seamless Wrought Steel Pipes
ASME B36.19M, Stainless Steel Pipe
ASME BPVC, ASME Boiler and Pressure Vessel Code

Publisher: The American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016-5990; Order Department: 22 Law Drive, P.O. Box 2300, Fairfield, NJ 07007-2300

ASTM A 234/ A 234M-11a, Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service
ASTM A 403/ A 403M-11, Specification for Wrought Austenitic Stainless Steel Piping Fittings
ASTM A 420/ A 420M-10a, Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Low-Temperature Service
ASTM A 815/ A 815M-10a, Specification for Wrought Ferritic, Ferritic/ Austenitic and Martensitic Stainless Steel Piping Fittings
ASTM A 960/ A 960M-10, Specification for Common Requirements for Wrought Steel Piping Fittings
ASTM B 361-08, Specification for Factory Made Wrought Aluminum and Aluminum Alloy Welding Fittings
ASTM B 363-06a, Specification for Seamless and Welded Unalloyed Titanium and Titanium Alloy Welding Fittings
ASTM B 366-10a, Specification for Factory-Made Wrought Nickel and Nickel Alloy Fittings
ASTM E 29-08, Practice for Using Significant Digits in Test Data to Determine Conformance With Specifications

Publisher: ASTM International (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959

ISO 6708:1995, Pipework components - Definition and selection of DN (nominal size)
ISO 9000:2005, Quality management systems – Fundamentals and vocabulary
ISO 9001:2008, Quality management systems - Requirements
ISO 9004:2009, Quality management systems – Guidelines for performance improvements

Publisher: International Organization for Standardization (ISO), 1 ch. de la Voie-Creuse, CP 56, CH-1211, Geneve 20, Switzerland

ASME B16.49-20XX
(Revision of ASME B16.49-2007)
2007

Proposed Revision of:

Factory-Made, Wrought Steel, Buttwelding Induction Bends for Transportation and Distribution Systems

DRAFT 08/3/12

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

HBW

Table 1 Tensile Properties

Grade and Symbol	Tensile Properties			Hardness	
	Minimum Yield Strength, MPa (ksi)	Minimum Tensile Strength, MPa (ksi)	Minimum Elongation, %	Maximum HB [Note (1)]	Maximum HRC [Note (2)]
P241 (X241)	241 (35)	414 (60)	20	238	22
P290 (X290)	290 (42)	414 (60)	20	238	22
P317 (X317)	317 (46)	434 (63)	20	238	22
P359 (X359)	359 (52)	455 (66)	20	238	22
P386 (X386)	386 (56)	490 (71)	20	238	22
P414 (X414)	414 (60)	517 (75)	20	238	22
P448 (X448)	448 (65)	531 (77)	18	238	22
P483 (X483)	483 (70)	565 (82)	16	247	24
P552 (X552)	552 (80)	621 (90)	16	247	24

GENERAL NOTE: Intermediate grades may be purchased subject to agreement between the purchaser and manufacturer.

NOTES:

HBW

(1) ~~HB~~ (Hardness Brinell) is the primary number.

(2) HRC (Hardness Rockwell C) is an approximation based on ASTM E 140 hardness conversion.

4.2 Depth of Stamping

Where steel stamps are used, care shall be taken so that the stamping is not so deep or so sharp as to cause cracking, or to reduce the wall thickness of the bend below the minimum allowed.

4.3 Compliance

Marking B16.49 on the bend designates that the bend was manufactured in conformance with ASME B16.49. Adding the prefix "ASME" is optional.

5 MATERIAL

5.1 Starting Materials

Bends covered by this Standard shall be produced from carbon steel pipe or cylinders having a chemistry in conformance with Table 2. Pipe may be furnished by the purchaser or supplied by the manufacturer. Starting pipe shall be seamless, submerged arc welded (SAW), or electric resistance welded. Helically welded pipe is allowed, provided the more stringent testing requirements of subpara. 11.1.3(b) are met. Starting material shall be free from low-melting temperature metals, cracks, nicks, gouges, waves, buckles, or other such surface contamination defects that may inhibit successful completion of a bend.

5.1.1 Contamination. Contamination of pipe surfaces before or during bending by low-melting temperature metals (i.e., copper, brass, zinc/galvanized, aluminum, etc.) can have serious effects on the bending process and the finished bend properties. Contact with such metals shall not be allowed.

5.1.2 Surface Condition. Prior to bending, material Grades P359 (X359) and higher shall be grit blasted to a commercial finish (SSPC SP-6) as a minimum on those sections to be bent.

Table 2 Maximum Limits of Chemical Elements That May Be Used

Element	Symbol	Maximum, %
Carbon	C	0.30
Manganese	Mn	1.60 [Note (1)]
Phosphorus	P	0.025
Sulfur	S	0.015
Silicon	Si	0.50
Chromium	Cr	0.30
Molybdenum	Mo	0.25
Vanadium	V	0.10
Copper	Cu	0.50
Nickel	Ni	1.00
Niobium	Nb (Cb)	0.10

GENERAL NOTE: The chemical requirements of this Table are not intended to represent the composition of any heat of steel, but to record the maximum permissible amounts of individual elements.

NOTE:

(1) For Grades P483 (X483) and higher for each reduction of 0.01% below the specified maximum carbon content, an increase of 0.05% above the maximum manganese content is permissible, up to a maximum of 2.00%.

6 MATERIAL FOR BENDS CONTAINING WELDS

6.1 Longitudinal Weld Seams

6.1.1 Seam welds in pipe made to an API, ASTM, or CSA specification must meet welding and nondestructive examination (NDE) requirements of that specification.

6.1.2 Other pipe or cylinders, not manufactured to the above specifications, shall be made by welders, welding operators, and welding procedures qualified under the provisions of Section IX of the ASME Boiler and Pressure Vessel Code (BPVC). Before bending, 100% of each weld seam shall be radiographed in accordance

with ASME Section VIII, Division 1, para. UW-51, and shall meet the acceptance criteria specified therein.

In place of radiographic examination, welds may be ultrasonically examined in accordance with Appendix 12 of ASME Section VIII, Division 1.

6.1.3 The longitudinal weld seam should be located on the neutral axis (ϕ = 0 deg or 180 deg in Fig. 1). When this is not possible, the weld seam shall be located not more than 15 deg from the neutral axis. Helically welded pipe is an exception to this weld location requirement.

6.2 Girth Welds

Bending through a girth weld shall not be allowed unless agreed upon between the purchaser and manufacturer.

7 CHEMICAL COMPOSITION

The chemical composition of each heat[1] of material furnished to this Standard, as determined by a product analysis, shall be in accordance with Table 2. Each element specified in Table 2 shall be tested for and reported on the material test report required in section 14. The carbon equivalent (CE) shall not exceed 0.45% as computed by eq. (2):

$$CE = C + \frac{Mn}{6} + \frac{(Cr + Mo + V)}{5} + \frac{(Cu + Ni)}{15} \quad (2)$$

8 MATERIAL PROPERTIES

The properties of the bend, as determined for each lot,[2] shall be in accordance with the ordered grade listed in Table 1.

8.1 Tensile Properties

The tensile properties shall be determined for the qualification bend in accordance with ASTM A 370. The yield-to-tensile ratio shall not exceed 0.90, except for Grade P483 (X483) and higher, for which the ratio shall not exceed 0.93. When the strength of the bend does not meet the ordered strength, the manufacturer may provide, with purchaser approval, bends of comparable strength to the design pipe. The thickness of the bend shall be at least equal to the specified design pipe thickness multiplied by the ratio of the specified minimum yield strength of the pipe and the minimum tested yield strength of the bend. For bends from welded pipe of NPS 8 (DN 200) or larger, a transverse weld tensile test in the final heat-treat condition shall be conducted to determine the ultimate tensile strength. See para. 11.1.1 for number, location, and orientation of test samples required.

8.2 Fracture Toughness Properties

Notch toughness properties of the bend material in the final heat-treated condition shall be determined on the qualification bend in all locations specified in Fig. 2 or 3 by a set of three transverse, full-size, Charpy V-notch specimens, with or without tapering[3] the ends, in accordance with ASTM A 370. When the material wall thickness does not permit machining full-size (10 mm × 10 mm) specimens, the largest size possible of either ⅔ size or ½ size shall be substituted. All dimensions other than thickness are the same for full-size specimens. Specimens shall be taken with the axis transverse to the longitudinal axis of the bend. If material wall thickness does not allow at least a ½-size Charpy specimen, no impact testing is required. Specimens shall be tested at −10°C (+14°F) or lower, unless otherwise specified by the purchaser (see para. SR15.4), and shall achieve an average shear area for all specimens of at least 50%, with no one specimen less than 40%. In addition, all specimens shall exhibit a minimum absorbed energy value of 27 J (20 ft-lbf) for Grade P386 (X386) and lower, and a minimum of 54 J (40 ft-lbf) for grades higher than P386 (X386). Weld metal shall meet an absorbed energy value of 27 J (20 ft-lbf) minimum for all grades. If using reduced specimens, the impact values may be reduced in accordance with the correction ratios in ASTM A 370. See para. 11.1.2 for location of testing samples required.

8.3 Hardness Testing

Hardness tests shall be performed in accordance with ASTM A 370 on the bend as required in para. 11.1.4. To verify uniformity in the bending process, all production bends shall be tested for hardness in the same locations as the qualification bend. The corresponding areas shall have average hardness readings ~~in the same quadrant around the circumference within the same average range as~~ the qualification bend, with no average equating to a tensile strength less than that required in Table 3 for the material grade marked on the bend. Use an average of at least three readings for each location tested. The type of portable hardness tester used on production bends shall be the same as used on the qualification bend. All testing shall be conducted in the final heat-treated condition. No hardness measurement shall exceed the maximum specified in Table 1.

not varying by more than 30 Brinell hardness or equivalent, from the average value measured in the same location of

[1] A heat of material shall consist of all pipe or cylinders from the same manufacturer and produced from a single cycle of a batch melting process.

[2] A lot shall consist of all bends from the same heat of material given the same heat treatment in a controlled furnace within a range of ±15°C (±25°F).

[3] When tapered-end specimens are used, the tapering shall not reduce the specimen length on one side below 28 mm (1.1 in.) or the end thickness below one-half the nominal specimen thickness.

Table 3 Limits on Essential Variables

Essential Variable	Limits of Variation
Pipe wall thickness	±3 mm (0.12 in.)
Bend-radius-to-diameter ratio (R/D_o)	+1R − 0
Forming velocity	±2.5 mm (0.1 in.) per min
Forming temperature	±25°C (±50°F) from the qualification temperature
Coil design	No change allowed
Coolant type	No change allowed
Cooling water temperature	±15°C (±25°F)
Flow rate/pressure of coolant	±10% change in flow rate (or equivalent rate in pressure)
Weld seam	15 deg from the neutral axis
Heat treatment	±15°C (±25°F) in holding temperature or any change in procedure
~~Induction heating power~~	~~±5%~~
Induction heating frequency	±20%
Soaking time	0–15 min

9 HEAT TREATMENT

9.1 Type

Unless otherwise specified by the purchaser, each bend shall be heat treated after bending (except as permitted in para. SR15.1) by one or more of the following methods:

(a) Stress Relieve or Temper. Uniformly, heat between 480°C (900°F) and 675°C (1,250°F) and hold at temperature for at least 30 min per 25 mm (1 in.) of thickness at temperature, but no less than 30 min.

(b) Normalize. Heat above the transformation temperature range and hold at temperature for a minimum of 20 min per 25 mm (1 in.) of thickness, but not less than 20 min, and allow to cool in still air.

(c) Quench and Temper. Heat above the transformation temperature range and hold at temperature for a minimum of 20 min per 25 mm (1 in.) of thickness and direct quench in either water, oil, or a synthetic quenchant. Reheat to temper as defined above. Quench facilities shall be of sufficient size and shall be equipped to ensure proper and uniform cooling.

9.2 Equipment

All furnace heat-treatment equipment shall have a recording device that is calibrated at least quarterly. Heat-treat furnaces shall be surveyed annually, or at a shorter interval, as necessary to maintain uniformity of heat treatment, or thermocouples shall be attached to each furnace load. Thermocouples shall be calibrated at least quarterly. Records shall be kept of furnace surveys, thermocouple calibrations, and if used, thermocouple readings for each furnace load. The furnace shall be controlled within a range of ±15°C (±25°F).

9.3 Heat-Treat Designators

Each bend and the material test report (see section 14) shall be identified with one of the following designators indicating final heat-treat condition:

N = normalize
NT = normalize and temper
SR = stress relieve
QT = quench and temper

10 QUALIFICATION BEND

10.1 Essential Variables

Prior to production bending, a qualification bend shall be made and tested from each heat of material to demonstrate the suitability of the bending procedure to provide a product meeting the required dimensions and material properties. This bend and tangent section shall be of adequate length to obtain all the required test coupons. All bends (i.e., qualification and production) shall be completed in a continuous heating cycle without stops or starts, unless such areas are included in the bend procedure qualification testing and found acceptable. Postbend heating for production bend dimensional corrections is not allowed unless covered in the qualification bend procedure. The procedure qualification shall account for the essential variables required to make a bend. When any of these essential variables change, a new qualification bend must be made. The manufacturer's quality assurance program shall include procedures that ensure that the essential variables are properly controlled. This includes equipment calibration frequency as necessary for control but in no case less than annually. Essential variables are shown in Table 3.

10.2 Records

10.2.1 Bend Qualification Procedure. Each manufacturer shall prepare a written procedure that demonstrates that bends having suitable properties such as strength, ductility, and hardness can be formed by that procedure. These records shall be available for the purchaser's review. Changes in the essential variables beyond the limits of variation shown in Table 3 shall require a new qualification bend test and procedure.

10.2.2 Testing Results. All applicable testing results shall be part of the records.

11 TEST REQUIREMENTS

The testing requirements differ between the qualification bend and the production bends. The following requirements apply in the locations specified. The qualification bend testing shall be conducted on a bend representative of the final heat-treat condition. The production bend tests shall be conducted on each bend in the same final heat-treat condition as that which produced the qualification bend.

Replace page 13 with:

MANDATORY APPENDIX I
REFERENCES

The following is a list of publications referenced in this Standard. Unless otherwise specified, the latest edition of ASME publications shall apply.

ANSI/NACE MR0175-03/ISO 15156-2009, Materials for use in H2S-containing environments in oil and gas production

Publisher: National Association of Corrosion Engineers (NACE International), 1440 South Creek Drive, Houston, TX 77084-4906

ASME Boiler and Pressure Vessel Code
ASME B16.25, Buttwelding Ends
ASME B31 Code for Pressure Piping
ASME B36.lOM, Welded and Seamless Wrought Steel Pipe

Publisher: The American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016-5990; Order Department: 22 Law Drive, P.O. Box 2300, Fairfield, NJ 07007-2300

ASTM A 370-12, Test Methods and Definitions for Mechanical Testing of Steel Products
ASTM E 29-08, Practice for Using Significant Digits in Test Data to Determine Conformance With Specifications
ASTM E 140-07, Hardness Conversion Table for Metals

Publisher: ASTM International (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959

ISO 6708-1995: Pipework components - Definition and selection of DN (nominal size)
ISO 9000-2005: Quality management systems - Fundamentals and vocabulary
ISO 9001-2008: Quality management systems - Requirements
ISO 9004-2009: Quality management systems - Guidelines for performance improvements

Publisher: International Organization for Standardization (ISO), 1 ch. de la Voie-Creuse, CP 56, CH-1211 Geneve 20, Switzerland

SSPC SP 6/NACE No. 3, Commercial Blast Cleaning

Publisher: Society for Protective Coatings (SSPC), 40 24th Street, Pittsburgh, PA 15222-4656

Tracking Number 50i86r1 **Revision to NSF/ANSI 50 – 2011**

Issue 86, Revision 1 (May 2012)

NSF/ANSI Standard

Equipment for Swimming Pools, Spas, Hot Tubs and other Recreational Water Facilities

Evaluation criteria for materials, components, products, equipment and systems for use at recreational water facilities

1 General

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1.5 Normative references

The following documents contain provisions that, through reference in this text, constitute provisions of this Standard. At the time of publication, the indicated editions were valid. All standards are subject to revision, and parties are encouraged to investigate the possibility of applying the recent editions of the standards indicated below. The most recent published edition of the document shall be used for undated references.

Reason: Language clarifies undated references. This statement is being added to all NSF Standards.

ANSI/APSP–16 2011. *Standard Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs*[1]

Reason: ANSI/APSP – 16 replaces the withdrawn standard ANSI/ASME A112.19.8a.

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~~ANSI/ASME A112.19.17 (2010). *Safety Vacuum Release Systems (SVRS) for Residential & Commercial Swimming Pool, Spa, Hot Tub, Wading Pool Suction System*~~ **Error! Bookmark not defined.**

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4 Design and construction

[1] Association of Pool and Spa Professionals, 2111 Eisenhower Avenue, Alexandria, VA 22314 <www.apsp.org>

This section contains general requirements that apply to all equipment covered under the scope of this Standard.

4.1 Mechanical parts

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4.1.4 Suction fittings

Suction fittings that are designed to be totally submerged for use in swimming pools and spa/hot tubs shall comply with ~~ASME A112.19.8~~ ANSI/APSP–16 and the material requirements of 3.

Reason: ANSI/APSP – 16 replaces the withdrawn standard ANSI/ASME A112.19.8a.

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8 Recessed automatic surface skimmers

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8.5 Cover and mounting ring

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8.5.2 Each type and model of polymer skimmer cover shall meet the UV exposure and structural integrity requirements in 8.5.2.1 and 8.5.2.2. Type and model differences that require separate testing include shape, structure, material, color, plating, and finish. Skimmer covers that are too large to fit in the UV exposure chamber may have material bar samples molded, exposed, and tested in a manner consistent with methods developed for ~~ASME A112.19.8~~ ANSI/APSP–16 suction fittings.

Reason: ANSI/APSP – 16 replaces the withdrawn standard ANSI/ASME A112.19.8a.

BSR/UL 180, Standard for Safety for Liquid-Level Indicating Gauges for Oil Burner Fuels

1.1 These requirements cover the construction and performance requirements of mechanical and electrical liquid-level gauges for use on vented atmospheric tanks intended primarily for the storage and supply of heating fuel for oil burning equipment, or alternately for the storage of diesel fuels for compression ignition engines and motor oils (new or used) for automotive service stations, in aboveground applications not exceeding 2,000 gal (7,570 L).

3.5 HIGH (LINE) VOLTAGE - Any plug outlet or field wired source of ~~electric~~ electricity from the power grid, nominally 115 volts and 60 hz.

5.2.2 The level measuring assembly shall be designed for installation in a tank top opening, shall have threaded connections of NPT, NPTF, BSPT, BSPP, NPSM, or similar types using industry recognized specifications, and shall:

a) Not exceed a nominal ~~1.0~~ 3/4 inch (19 mm) to ~~2.0~~ 4.0 inch (38 mm) pipe size range; and

b) Not permit water or debris from entering the tank opening.

5.3.2 The level indicating assembly shall have a readout with at least the following scale information that is readily visible from 3.0 ft (0.9 m).

a) The words "Empty" and "Full" or "0%" and "100%"; and

b) At least 3 equal intermediate levels, in fraction or percent .

7.3.1 If necessary to assemble the gauge on a tank for testing, a nominal 220 - 330 gal 833 - 1249 L) typical primary or secondary obround shape tank in accordance with the Standard for Steel Tanks for Oil-Burner Fuels and Other Combustible Liquids, UL 80 shall be used unless other design types, shapes or capacities are necessary to meet worst case or special requirements.

7.4.1 If necessary to assemble piping to the test tank, typical schedule 40 NPT threaded steel "black" pipe and fittings shall be used in nominal sizes of 2 inch (50.8 mm) (fill pipe) or 1-1/4 inch (31.8 mm) (vent pipe). If supply piping is required, Type L copper tubing with compression fittings shall be used.

8.1 Representative gauge sample(s) in accordance with 7.1 shall be evaluated for

functional operation and accuracy in accordance with 8.4 with Class II and Class III liquids under the following conditions:

a) Room temperature, and if applicable to affected products (in accordance with 8.2 and 8.3);

b) High temperature of 50 ±2°C (122 ±3.6°F) using the same sample; and/or

c) Low temperature of minus 30 ±2°C (minus 22±3.6°F) using the same sample.

The results shall be used for initial compliance (in accordance with 8.5), and shall also establish a baseline to which any repeat tests, after other test conditions, are judged for comparison.

8.5 The gauge shall indicate the liquid level as intended without excessive delay or fluctuation, and each measured value shall be visible from 3.0 ~~inches~~ feet (0.9 m) and accurate to within ±10 percent of the actual tank capacity.

9.1.1 Representative gauge sample(s) in accordance with 7.1 shall be evaluated for resistance to assembly and use abuses in accordance with the 9.2 - 9.4 test sequence under each of the following conditions:

a) Room temperature, and if applicable to affected products (in accordance with 9.1.2 and 9.1.3);

b) High temperature of 50 ±2°C (122 ±3.6°F) using the same sample; and/or

c) Low temperature of minus 30 ±2°C (minus 22±3.6°F) using the same sample.

Following completion of all tests, samples shall be assessed for damage, with worst case one(s) subjected to repeat Functional Operation Tests (in accordance with 9.5) if applicable.

Samples with worst case damage from the Assembly and Abuse Tests shall also be used or re-created on new samples to conduct the (Pressure/Vacuum Strength Test (in accordance with 11.4), Rain Test (in accordance with 11.5) and Icing Test (in accordance with 11.6) as applicable.

9.4.2 The samples shall be impacted once at 5 ft-lb (6.8 Nm) with a 2.0 in (50.8 mm) steel ball on the gauge area(s) most likely to cause damage or malfunction. The ball may be guided to achieve this means.

10.2.1 Gauge samples with functional polymers, electronics or other components that

may be affected by long term exposure to heat, shall be subjected to accelerated aging in an air circulating oven for 180 days at 70 ±2℃ 158 ±3.6℉ ;

10.4.1 Gauge samples with functional external metals or other components that may be affected by long term exposure to corrosive elements, shall be subjected to 600 hrs of a 5 percent NaCl H2O Solution (6.5 - 7.2 pH and 1.033 - 1.039 spg) atomized through nozzles at 18 ±2 psi (124 ±14 kPa) in 35 ±2℃ (95 ± 3.6℉) humid air. The test chamber shall be sealed with the samples suspended in the salt fog.

10.5.1 Gauge samples with components that are intended to be in contact with either the liquids and/or vapors of the tank contents, shall be subjected to long term compatibility exposures for 90 days at 60 ±2℃ 140 ±3.6℉ using the test fuels and/or vapors indicated in 10.5.2 and exposure conditions in 10.5.3.

11.4.3 Samples shall be installed in a simulated tank top opening of a small test container filled with water, then subjected to 1 minute of pressure at +5.0 psig (34 kPa), followed by 1 minute of vacuum at -1.0 psig (-6.9 kPa). ~~Minor~~ No leakage is permitted through fitting connections or gaskets during the test.

11.5.3 The gauge shall be installed in a simulated flat top tank opening, then subjected to a 30 minute simulated rain emitted from a Rain Test Spray Head, in accordance with Figure 11.1. The nozzle shall operate at 5.0 psig (34 kPa) within 3.0 - 5.0 ft (0.9 - 1.5 m) of the test area at a 45 degree angle focused on the gauge area(s) most likely to allow entry of water.