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# Project Initiation Notification System (PINS)

Section 2.5.1 of the *ANSI Essential Requirements* ([www.ansi.org/essentialrequirements](http://www.ansi.org/essentialrequirements)) describes the Project Initiation Notification System (PINS) and includes requirements associated with a PINS Deliberation. Following is a list of PINS notices submitted for publication in this issue of ANSI Standards Action by ANSI-Accredited Standards Developers (ASDs). Please also review the section in Standards Action entitled "American National Standards Maintained Under Continuous Maintenance" for information about American National Standards (ANS) maintained under the continuous maintenance option, as a PINS to initiate a revision of such standards is not required. Use the following Public Document Library url to access PDF & EXCEL reports of approved & proposed ANS: [List of Approved and Proposed ANS](#). Directly and materially interested parties wishing to receive more information or to submit comments are to contact the sponsoring ANSI-Accredited Standards Developer directly **within 30 calendar days** of the publication of this PINS announcement.

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## ACCA (Air Conditioning Contractors of America)

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### Revision

BSR/ACCA 9 Qlvp Standard-202x, HVAC Quality Installation Verification Protocols (revision of ANSI/ACCA 9 Qlvp Standard-2016)

Stakeholders: HVAC system designers and contractors, HVAC equipment manufacturers, code officials, residential and commercial builders, government agencies, and utilities.

Project Need: To process proposed revisions in concert with proposed revisions to ACCA 5 QI, currently under development.

Interest Categories: Various HVAC industry interests, building code officials, builders, government agencies associated with building and HVAC energy performance, and utilities.

Scope: This Standard specifies the protocols to verify that elements of a specific HVAC system installation complying with ANSI/ACCA 5 QI – 2015, HVAC Quality Installation Specification. The verification protocols apply to installations of HVAC equipment/components in new and existing residential and commercial buildings that seek to demonstrate adherence to the requirements of the ACCA 5 QI Standard.

## AWS (American Welding Society)

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### Revision

BSR/AWS B2.1-1-027-202x, Standard Welding Procedure Specification (SWPS) for Self-Shielded Flux Cored Arc Welding of Carbon Steel (M-1 or P-1, Groups 1 and 2), 1/8 inch [3 mm] through 1/2 inch [13 mm] Thick, E71T -11, in the As-Welded Condition, Primarily Plate and Structural Applications (revision of ANSI/AWS B2.1-1-027 -2018 (R2022))

Stakeholders: Manufacturers, welders, engineers, CWIs, accredited training facilities.

Project Need: Need for pretested welding procedures that satisfy the technical requirements for the commonly used construction codes and specifications.

Interest Categories: Producers, Users, General Interest, and Educators.

Scope: This standard contains the essential welding variables for carbon steel in the thickness range of 1/8 inch [3 mm] through 1/2 inch [13 mm], using self-shielded flux cored arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove and fillet welds. This SWPS was developed primarily for plate and structural applications.

**AWWA (American Water Works Association)**

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**Revision**

BSR/AWWA B114-202x, Reverse Osmosis and Nanofiltration Systems for Water Treatment (revision of ANSI/AWWA B114-2022)

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

Project Need: The purpose of this standard is to provide a minimum set of requirements for reverse osmosis (RO) and nanofiltration (NF) membrane systems used for water and reclaimed water treatment systems. This standard is intended to assist with the design, procurement, installation, and commissioning of RO and NF membrane systems.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard delineates minimum requirements for reverse osmosis (RO) and nanofiltration (NF) membrane systems for water and reclaimed water treatment systems.

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**Revision**

BSR/AWWA B200-202x, Sodium Chloride (revision of ANSI/AWWA B200-2022)

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

Project Need: The purpose of this standard is to provide the minimum requirements for sodium chloride, including physical, chemical, sampling, packaging, shipping, and testing requirements.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes sodium chloride in the forms of rock, vacuum granulated, compressed vacuum granulated, solar, and compressed solar salt for use in the recharging of cation-exchange materials in water supply service for softening municipal and industrial potable water, wastewater, and reclaimed water supplies.

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**Revision**

BSR/AWWA B304-202x, Liquid Oxygen for Ozone Generation for Water, Wastewater, & Reclaimed Water Systems (revision of ANSI/AWWA B304-2021)

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

Project Need: The purpose of this standard is to provide the minimum requirements for LOX intended for the generation of ozone used in the treatment of water, wastewater, and reclaimed water. This standard includes physical, chemical, packaging, shipping, sampling, and testing requirements.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes liquid oxygen (LOX) for the generation of ozone used in the treatment of potable water, wastewater, or reclaimed water.

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**Revision**

BSR/AWWA C213-202x, Fusion-Bonded Epoxy Coatings & Linings for Steel Pipe and Fittings (revision of ANSI/AWWA C213-2022)

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

Project Need: The purpose of this standard is to provide the minimum requirements for fusion-bonded epoxy coatings and linings for steel water pipelines and fittings, including materials, application, and testing.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes the material and application requirements for fusionbonded epoxy coatings and linings for steel water pipe, special sections, welded joints, connections, fittings, and appurtenances for steel water pipelines installed underground or underwater.

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**Revision**

BSR/AWWA C215-202x, Extruded Polyolefin Coatings for Steel Water Pipe (revision of ANSI/AWWA C215-2022)

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

Project Need: The purpose of this standard is to provide purchasers, manufacturers, and constructors with the minimum requirements for extruded polyolefin coatings for steel water pipe, including material, application, inspection, testing, marking, handling, and packaging requirements

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes the materials, systems, and application requirements for shop-applied, extruded polyolefin coatings for the exterior of steel water pipes.

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**Revision**

BSR/AWWA C230-202x, Stainless-Steel Full-Encirclement Repair and Service Connection Clamps for 2-in. - 12-in. (50-mm - 300-mm) Pipe (revision of ANSI/AWWA C230-2021)

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

Project Need: The purpose of this standard is to provide the minimum requirements for full-encirclement-type repair clamps and full-encirclement service connection clamps for various pipe materials, including system components, testing, and marking requirements.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes fabricated full-encirclement stainless-steel band clamps for use in the repair or tapped service connection of potable water, wastewater, and reclaimed water piping systems.

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**Revision**

BSR/AWWA C503-202x, Wet-Barrel Fire Hydrants (revision of ANSI/AWWA C503-2021)

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

Project Need: The purpose of this standard is to provide purchasers, manufacturers, and suppliers with the minimum requirements for wet-barrel fire hydrants for fire-protection service, including materials, design, inspection, testing, marking, and shipping requirements.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard pertains to the various types and classes of wet-barrel fire hydrants for use in fire-protection service in areas where the climate is mild and freezing temperatures do not occur.

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**Revision**

BSR/AWWA C510-202x, Double Check-Valve Backflow Prevention Assembly (revision of ANSI/AWWA C510-2017 (R2021))

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

Project Need: The purpose of this standard is to provide the minimum requirements for double check-valve backflow prevention assemblies for potable water applications, including materials, general and detailed design, workmanship, and shipping and delivery.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes the double check-valve backflow prevention assembly for potable water applications.

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**Revision**

BSR/AWWA C511-202x, Reduced-Pressure Principle Backflow Prevention Assembly (revision of ANSI/AWWA C511-2017 (R2021))

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

Project Need: The purpose of this standard is to provide the minimum requirements for reduced-pressure principle backflow prevention assemblies for potable water applications, including materials, general and detailed design, workmanship, and shipping and delivery.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes the reduced-pressure principle backflow prevention assembly for potable water applications.

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**Revision**

BSR/AWWA C516-202x, Large-Diameter Rubber-Seated Butterfly Valves, Sizes 78 In. (2000 mm) and Larger (revision of ANSI/AWWA C516-2021)

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

Project Need: The purpose of this standard is to provide the minimum requirements for large-diameter flanged rubber-seated butterfly valve assemblies, suitable for freshwater and reclaimed water service.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard establishes minimum requirements for rubber-seated butterfly valve assemblies that are 78 in. (2,000 mm) and larger in diameter with flanged ends suitable for fresh and reclaimed water.

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**Revision**

BSR/AWWA C517-202x, Resilient-Seated Cast-Iron Eccentric Plug Valves (revision of ANSI/AWWA C517-2016 (R2021))

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

Project Need: The purpose of this standard is to provide minimum requirements for resilient-seated cast-iron eccentric plug valves, suitable for water, wastewater, and reclaimed water service, including materials, application, inspection, handling, and shipping.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes resilient-seated cast-iron eccentric plug valves, 3 in. (75 mm) through 72 in. (1,800 mm) in diameter, with flanged, grooved, or mechanical-joint ends, for water, wastewater, and reclaimed water systems.

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**Revision**

BSR/AWWA C530-202x, Pilot-Operated Control Valves (revision of ANSI/AWWA C530-2022)

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

Project Need: The purpose of this standard is to define the minimum requirements for pilot-operated control valves, including sizing considerations, design verification, testing, delivery, handling, and storage.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes hydraulic and pneumatic linear and quarter turn actuators for operation of valves and slide gates in utility systems.

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**Revision**

BSR/AWWA C541-202x, Hydraulic and Pneumatic Cylinder and Vane-Type Actuators for Valves and Slide Gates (revision of ANSI/AWWA C541-2016 (R2021))

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

Project Need: The purpose of this standard is to define the minimum requirements for hydraulic and pneumatic cylinder, pneumatic rack and pinion, and pneumatic vane-type-actuators for valves and slide gates, suitable for water, wastewater, and reclaimed water service, including sizing considerations, design, verification, delivery, handling, and storage.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes hydraulic and pneumatic linear and quarter turn actuators for operation of valves and slide gates in utility systems.

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**Revision**

BSR/AWWA C542-202x, Electric Motor Actuators for Valves and Slide Gates (revision of ANSI/AWWA C542-2016 (R2021))

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

Project Need: The purpose of this standard is to define the minimum requirements for electric motor actuators for valves and slide gates, including sizing considerations, design, testing, delivery, handling, and storage.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes electric motor actuators for valves and slide gates in water, wastewater, and reclaimed water utility systems.

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**Revision**

BSR/AWWA C560-202x, Cast-Iron Slide Gates (revision of ANSI/AWWA C560-2021)

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

Project Need: The purpose of this standard is to provide the minimum requirements for cast-iron slide gates, including materials, general design, manufacture, testing, inspection, and shipment.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes vertically mounted, cast-iron slide gates with full aperture closing, designed for either seating head, unseating head, or both, in ordinary water supply and wastewater service.

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**Revision**

BSR/AWWA C561-202x, Fabricated Stainless-Steel Slide Gates (revision of ANSI/AWWA C561-2021)

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

Project Need: The purpose of this standard is to provide the minimum requirements for fabricated stainless-steel slide gates, including materials, general design, manufacture, testing, inspection, and shipment.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes vertically mounted, fabricated stainless-steel slide gates with full-aperture closure, designed for either seating head or unseating head or both, in ordinary water supply and wastewater service.

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**Revision**

BSR/AWWA C562-202x, Fabricated Aluminum Slide Gates (revision of ANSI/AWWA C562-2021)

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

Project Need: The purpose of this standard is to provide the minimum requirements for fabricated aluminum slide gates, including materials, general design, manufacture, testing, inspection, and shipment.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes vertically mounted, fabricated aluminum slide gates with full-aperture closure, designed for either seating head or unseating head or both, in ordinary water supply and wastewater service.

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**Revision**

BSR/AWWA C563-202x, Fabricated Composite Slide Gates (revision of ANSI/AWWA C563-2021)

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

Project Need: The purpose of this standard is to provide the minimum requirements for fabricated composite slide gates, including materials, general design, manufacture, testing, inspection, and shipment.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes vertically mounted, fabricated, composite, resilientseated slide gates with full-aperture closure, designed for either seating head or unseating head or both, in ordinary water supply and wastewater service.

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**Revision**

BSR/AWWA C605-202x, Underground Installation of Polyvinyl Chloride (PVC) and Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe and Fittings (revision of ANSI/AWWA C605-2021)

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

Project Need: The purpose of this standard is to provide the minimum requirements for underground installation and hydrostatic testing procedures for PVC or PVCO pressure pipe and fittings used to transport potable water, reclaimed water, irrigation water, or wastewater, or for the conveyance of any fluid compatible with PVC or PVCO.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes underground installation and pressure testing requirements for polyvinyl chloride (PVC) and molecularly oriented polyvinyl chloride (PVCO) pressure pipe and fittings used to transport potable water, reclaimed water, irrigation water, and wastewater, or for the conveyance of any fluid compatible with PVC or PVCO.

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**Revision**

BSR/AWWA C606-202x, Grooved and Shouldered Joints (revision of ANSI/AWWA C606-2022)

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

Project Need: The purpose of this standard is to provide the minimum requirements for grooved and shouldered joints, including materials, dimensions, tolerances, finishes, tests, and testing procedures.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes grooved and shouldered joints for ductile-iron pipe (DIP), metallic pressure pipe of iron pipe size (IPS), fittings, and other components for water, wastewater, reclaimed water, and other services.

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**Revision**

BSR/AWWA C623-202x, Cured-In-Place Pipe (CIPP) (revision of ANSI/AWWA C623-2021)

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

Project Need: The purpose of this standard is to provide the minimum requirements for the materials and installation of CIPP systems for the rehabilitation of existing potable water mains 4 in. (100 mm) in diameter and larger.

Interest Categories: General Interest, Producers, and Users.

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

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**Revision**

BSR/AWWA C654-202x, Disinfection of Wells (revision of ANSI/AWWA C654-2021)

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

Project Need: The purpose of this standard is to establish the minimum requirements for the disinfection of wells for potable water service, including procedures for correcting the source of contamination, disinfection, and bacteriological testing.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes the procedures for disinfection, bacteriological testing, and contamination prevention of new and existing individual, private, and community wells for potable water service following construction, servicing, maintenance, or any other activity or event that might lead to contamination of the water.

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**Revision**

BSR/AWWA C671-202x, Online Turbidimeter Operation and Maintenance (revision of ANSI/AWWA C671-2021)

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

Project Need: The purpose of this standard is to provide the minimum requirements for operation and maintenance of online turbidimeters.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes online turbidimeter operation and maintenance (O&M) for online turbidimeters used in the treatment and monitoring of potable water, reclaimed water, or wastewater effluent.

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**Revision**

BSR/AWWA C715-202x, Cold Water Meters - Electromagnetic & Ultrasonic Type for Revenue Applications (revision of ANSI/AWWA C715-2018 (R2022))

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

Project Need: The purpose of this standard is to provide the minimum requirements for potable cold-water meters of the electromagnetic and ultrasonic type, in sizes 1/2 in. (13 mm) through 20 in. (500 mm), for revenue applications.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard provides the minimum requirements for potable cold-water meters of the electromagnetic and ultrasonic type, in sizes 1/2 in. (13 mm) through 20 in. (500 mm), for revenue applications. It describes two performance classes of potable cold-water meters of the electromagnetic and ultrasonic type, in sizes 1/2 in. (13 mm) through 20 in. (500 mm), for revenue applications, and the materials and workmanship employed in their fabrication. Type I meters represent residential and commercial applications where low flow accuracy is of particular concern. Type II meters represent commercial applications where low flow is not of primary concern.

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**Revision**

BSR/AWWA C800-202x, Underground Service Line Valves and Fittings (revision of ANSI/AWWA C800-2021)

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

Project Need: The purpose of this standard is to provide the minimum requirements for underground service line valves and fittings, including materials, design, inspection, and delivery

Interest Categories: General Interest, Producers, and Users.

Scope: This standard covers valves, fittings, service saddles, and meter setters for use in a service line from the main through the meter valve or meter-setting appurtenance.

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**Revision**

BSR/AWWA C900-202x, Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 In. - 60 In. (100 mm - 1,500 mm) (revision of ANSI/AWWA C900-2022)

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

Project Need: The purpose of this standard is to provide minimum manufacturing, verification, and marking requirements for PVC pressure pipe and fabricated fittings, 4-in. (100-mm) through 60-in. (1,500-mm).

Interest Categories: General Interest, Producers, and Users.

Scope: This standard covers PVC pipe and fabricated fittings manufactured for conveying potable water, reclaimed water, irrigation water, wastewater, or any fluid compatible with non-plasticized PVC.

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**Revision**

BSR/AWWA C903-202x, Polyethylene-Aluminum-Polyethylene (PE-AL-PE) Composite Pressure Pipe, 12 mm (1/2 In.) Through 51 mm (2 In.) for Water Service (revision of ANSI/AWWA C903-2021)

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

Project Need: The purpose of this standard is to provide the requirements for materials, design, testing, marking, verification and inspection, and shipping of PE-AL-PE pipe for use as service lines for underground potable water distribution systems.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes the requirements for composite polyethylene-aluminum-polyethylene pipe (hereinafter referred to as PE-AL-PE) in metric nominal inside diameter sizes 12 mm (1/2 inch) through 51 mm (2 inch). The pipe described by this standard is intended to be used for potable cold water supply outside buildings as buried water main and service pipeline.

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**Revision**

BSR/AWWA C906-202x, Polyethylene (PE) Pressure Pipe & Fittings, 4 In. Through 65 In. (100 mm Through 1,650 mm), for Waterworks (revision of ANSI/AWWA C906-2021)

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

Project Need: The purpose of this standard is to provide purchasers, manufacturers, and suppliers with the minimum requirements for PE pressure pipe and fittings, 4–65 in. (100–1,650 mm), for potable water, wastewater, and reclaimed water distribution and transmission.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes polyethylene (PE) pressure pipe and fittings made from materials conforming to standard PE materials designation code PE4710.

**AWWA (American Water Works Association)**

Paul Olson; [polson@awwa.org](mailto:polson@awwa.org) | 6666 W. Quincy Avenue | Denver, CO 80235 [www.awwa.org](http://www.awwa.org)

**Revision**

BSR/AWWA C909-202x, Molecularly Oriented PVC Pressure Pipe, 4 In. (100 mm) and Larger (revision of ANSI/AWWA C909-2022)

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

Project Need: The purpose of this standard is to provide purchasers, manufacturers, and suppliers with the minimum requirements for PVC pressure pipe, 4 in. (100 mm) and larger, for potable water, wastewater, and reclaimed water service.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard pertains to molecularly oriented polyvinyl chloride (PVC) pressure pipe that is manufactured from starting stock pipe made from ASTM D1784 cell class 12454 material.

**AWWA (American Water Works Association)**

Paul Olson; [polson@awwa.org](mailto:polson@awwa.org) | 6666 W. Quincy Avenue | Denver, CO 80235 [www.awwa.org](http://www.awwa.org)

**Revision**

BSR/AWWA C110/A21.10-202x, Ductile-Iron and Gray-Iron Fittings (revision of ANSI/AWWA C110/A21.10-2021)

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

Project Need: The purpose of this standard is to provide the minimum requirements for ductile-iron and gray-iron fittings, 3 through 48 in. (80 through 1,200 mm), for potable water, wastewater, and reclaimed water.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes 3- to 48-in. (80- to 1,200-mm) gray-iron or ductile-iron fittings to be used with ductile-iron pipe for potable water, wastewater, and reclaimed water.

**AWWA (American Water Works Association)**

Paul Olson; [polson@awwa.org](mailto:polson@awwa.org) | 6666 W. Quincy Avenue | Denver, CO 80235 [www.awwa.org](http://www.awwa.org)

**Revision**

BSR/AWWA C150/A21.50-202x, Thickness Design of Ductile-Iron Pipe (revision of ANSI/AWWA C150/A21.50-2021)

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

Project Need: The purpose of this standard is to provide the minimum requirements for the thickness design of ductile-iron pipe, including basis of design and design procedure.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes the thickness design of ductile-iron pipe complying with the requirements of ANSI\*/AWWA C151/A21.51, Ductile-Iron Pipe, Centrifugally Cast.

**AWWA (American Water Works Association)**

Paul Olson; [polson@awwa.org](mailto:polson@awwa.org) | 6666 W. Quincy Avenue | Denver, CO 80235 [www.awwa.org](http://www.awwa.org)

**Revision**

BSR/AWWA D100-202x, Welded Carbon Steel Tanks for Storage (revision of ANSI/AWWA D100-2021)

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

Project Need: The purpose of this standard is to provide minimum requirements for the design, construction, inspection, and testing of new welded carbon steel tanks for the storage of water at atmospheric pressure.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes the minimum requirements for the design, construction, inspection, and testing of new welded carbon steel tanks for the storage of water at atmospheric pressure.

**AWWA (American Water Works Association)**

Paul Olson; [polson@awwa.org](mailto:polson@awwa.org) | 6666 W. Quincy Avenue | Denver, CO 80235 [www.awwa.org](http://www.awwa.org)

**Revision**

BSR/AWWA D102-202x, Coating Steel Water-Storage Tanks (revision of ANSI/AWWA D102-2021)

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

Project Need: The purpose of this standard is to provide the minimum requirements for coating steel water-storage tanks, including materials, coating systems, surface preparation, application, and inspection and testing.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard describes coating systems for coating and recoating the inside and outside surfaces of steel tanks used for potable water storage in water supply service.

**AWWA (American Water Works Association)**

Paul Olson; [polson@awwa.org](mailto:polson@awwa.org) | 6666 W. Quincy Avenue | Denver, CO 80235 [www.awwa.org](http://www.awwa.org)

**Revision**

BSR/AWWA E103-202x, Horizontal and Vertical Line-Shaft Pumps (revision of ANSI/AWWA E103-2021)

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

Project Need: The purpose of this standard is to provide minimum requirements for water system pumps of the types identified in Sec. 1.1.

Interest Categories: General Interest, Producers, and Users.

Scope: This standard provides minimum requirements for horizontal centrifugal pumps and for vertical line-shaft pumps for installation in wells, water treatment plants, water transmission systems, and water distribution systems.

**AWWA (American Water Works Association)**

Paul Olson; [polson@awwa.org](mailto:polson@awwa.org) | 6666 W. Quincy Avenue | Denver, CO 80235 [www.awwa.org](http://www.awwa.org)

**Revision**

BSR/AWWA G200-202x, Distribution Systems Operation and Management (revision of ANSI/AWWA G200-2021)

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

Project Need: The purpose of this standard is to define the critical requirements for the operation and management of water distribution systems, including maintaining water quality, system management programs, and operation and maintenance of facilities.

Interest Categories: Management Interest, Service Provider/Consultant, and User.

Scope: This standard describes the critical requirements for the effective operation and management of drinking water distribution systems.

**AWWA (American Water Works Association)**

Paul Olson; [polson@awwa.org](mailto:polson@awwa.org) | 6666 W. Quincy Avenue | Denver, CO 80235 [www.awwa.org](http://www.awwa.org)

**Revision**

BSR/AWWA G300-202x, Source Water Protection (revision of ANSI/AWWA G300-2022)

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

Project Need: The purpose of this standard is to define the minimum program requirements for the protection of source waters.

Interest Categories: Management Interest, Service Provider/Consultant, and User.

Scope: This standard describes the essential elements for the effective protection of source waters.

**AWWA (American Water Works Association)**

Paul Olson; [polson@awwa.org](mailto:polson@awwa.org) | 6666 W. Quincy Avenue | Denver, CO 80235 [www.awwa.org](http://www.awwa.org)

**Revision**

BSR/AWWA G510-202x, Wastewater Treatment Plant Operation and Management (revision of ANSI/AWWA G510-2021)

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

Project Need: The purpose of this standard is to define the minimum requirements for the effective operation and management of wastewater treatment plants, including water quality, system management programs, and operation and maintenance of facilities.

Interest Categories: Management Interest, Service Provider/Consultant, and User.

Scope: This standard describes the essential or critical requirements for the effective operation and management of a wastewater treatment plant.

**AWWA (American Water Works Association)**

Paul Olson; [polson@awwa.org](mailto:polson@awwa.org) | 6666 W. Quincy Avenue | Denver, CO 80235 [www.awwa.org](http://www.awwa.org)

**Revision**

BSR/AWWA G560-202x, Stormwater Management for Water Utilities (revision of ANSI/AWWA G560-2022)

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

Project Need: The purpose of this standard is to define the minimum requirements for a water utility's stormwater management program, including management of stormwater on water utility sites, addressing water quality and water quantity issues, planning and design of stormwater programs, and incorporation of stormwater in integrated water resource planning and management.

Interest Categories: Management Interest, Service Provider/Consultant, and User.

Scope: This standard describes the critical requirements for the effective management of stormwater by a water utility.

**AWWA (American Water Works Association)**

Paul Olson; [polson@awwa.org](mailto:polson@awwa.org) | 6666 W. Quincy Avenue | Denver, CO 80235 [www.awwa.org](http://www.awwa.org)

**Revision**

BSR/AWWA J100-202x, Risk and Resilience Management (revision of ANSI/AWWA J100-2020)

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

Project Need: The purpose of this standard is to enable water and wastewater utility owners and operators to make sound decisions when allocating limited resources to reducing risk and improving resilience. This standard sets the requirements for all-hazards risk and resilience analysis and management for the water sector.

Interest Categories: Management Interest, Service Provider/Consultant, and User.

Scope: This standard describes and documents a process for identifying risk as a function of the consequences, vulnerabilities, and likelihood of man-made threats, natural hazards, and dependency and proximity hazards.

**NEMA (National Electrical Manufacturers Association)**

Khaled Masri; [Khaled.Masri@nema.org](mailto:Khaled.Masri@nema.org) | 1300 North 17th Street | Rosslyn, VA 22209 [www.nema.org](http://www.nema.org)

***New Standard***

BSR/NEMA IM 60003-202x, Electrical Insulating Varnish (new standard)

Stakeholders: Manufacturers, testing labs, and users of laminated thermosetting products.

Project Need: Replace and update an outdated standard and issue as an American National Standard.

Interest Categories: Producers, Users, and General Interests.

Scope: This Standards is intended to present in concise and convenient form all standards for electrical insulating varnishes. It includes definitions, instructions, and methods for determining the mechanical, thermal, and electrical performance characteristics of electrical insulating varnishes and specifications.

**NEMA (National Electrical Manufacturers Association)**

Khaled Masri; [Khaled.Masri@nema.org](mailto:Khaled.Masri@nema.org) | 1300 North 17th Street | Rosslyn, VA 22209 [www.nema.org](http://www.nema.org)

***New Standard***

BSR/NEMA IM 60004-202x, Calendered Aramid Papers Used for Electrical Insulation (new standard)

Stakeholders: Manufacturers, testing labs, and users of laminated thermosetting products.

Project Need: Replace and update an outdated standard and issue as an American National Standard.

Interest Categories: Producers, Users, and General Interests.

Scope: This Standards Publication is applicable to qualification and testing of calendered aramid papers in thicknesses up to 30 mils (0.76 mm) for use as electrical insulation. Methods and properties applicable to aramid pressboards, uncalendered aramid papers, and papers made of blends of aramid with other materials are substantially different and are not considered in this standard.

# Call for Comment on Standards Proposals

## American National Standards

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

### Ordering Instructions for "Call-for-Comment" Listings

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Comments should be addressed to the organization indicated, with a copy to the Board of Standards Review, American National Standards Institute, 25 West 43rd Street, New York, NY 10036. e-mail: [psa@ansi.org](mailto:psa@ansi.org)

\* Standard for consumer products

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## Comment Deadline: February 5, 2023

### ASME (American Society of Mechanical Engineers)

Two Park Avenue, M/S 6-2B, New York, NY 10016-5990 | [ansibox@asme.org](mailto:ansibox@asme.org), [www.asme.org](http://www.asme.org)

#### Revision

BSR/ASME PTC 22-202x, Gas Turbines (revision of ANSI/ASME PTC 22-2014)

This Code provides for the testing of aero-derivative or industrial frame gas turbines supplied with gaseous or liquid fuels (or solid fuels converted to liquid or gas prior to entry into the gas turbine). This Code provides for comparative (back-to-back) tests designed to verify performance differentials of the gas turbine, primarily for testing before and after modifications, uprates, or overhauls.

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

Send comments (copy [psa@ansi.org](mailto:psa@ansi.org)) to: Justin Cassamassino; [cassasmassinoj@asme.org](mailto:cassasmassinoj@asme.org)

### ULSE (UL Standards & Engagement)

333 Pfingsten Road, Northbrook, IL 60062-2096 | [Lisette.delgado@ul.org](mailto:Lisette.delgado@ul.org), <https://ulse.org/>

#### Revision

BSR/UL 1008A-202x, Standard for Safety for Transfer Switch Equipment, Over 1000 Volts (revision of ANSI/UL 1008A-2020)

This revision of UL 1008A includes: 1. revisions to Table 16 to align with UL 347 up to 15 kV, and 2. updates to service equipment requirements to align with 2020 NFPA 70.

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

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

## Comment Deadline: February 20, 2023

### **AMPP (Association for Materials Protection and Performance)**

15835 Park Ten Place, Houston, TX 77084 | [rick.southard@ampp.org](mailto:rick.southard@ampp.org), [www.ampp.org](http://www.ampp.org)

#### **Reaffirmation**

BSR/NACE MR0103/ISO 17945-2016 (R202x), Petroleum, petrochemical and natural gas industries - Metallic materials resistant to sulfide stress cracking in corrosive petroleum refining environments (reaffirm a national adoption ANSI/NACE MR0103/ISO 17945-2016)

This standard establishes material requirements for resistance to SSC in sour petroleum refining and related processing environments containing H<sub>2</sub>S either as a gas or dissolved in an aqueous (liquid water) phase with or without the presence of hydrocarbon. Specifically, this standard is directed at the prevention of SSC of equipment (including pressure vessels, heat exchangers, piping, valve bodies, and pump and compressor cases) and components used in the refining industry. It is intended to be used by refiners, equipment manufacturers, engineering contractors, and construction contractors.

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Send comments (copy [psa@ansi.org](mailto:psa@ansi.org)) to: Richard Southard; [rick.southard@ampp.org](mailto:rick.southard@ampp.org)

### **ASTM (ASTM International)**

100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 | [accreditation@astm.org](mailto:accreditation@astm.org), [www.astm.org](http://www.astm.org)

#### **New Standard**

BSR/ASTM WK72526-202x, Practice for Expert Opinions on the Interpretation of Primer Gunshot Residue (pGSR) Analysis by Scanning Electron Microscopy/Energy Dispersive X-Ray Spectrometry (SEM/EDS) (new standard)

<https://www.astm.org/get-involved/technical-committees/ansi-review>

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#### **New Standard**

BSR/ASTM WK72856-202x, Practice for the Collection and Preservation of Organic Gunshot Residue (new standard)

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#### **Reaffirmation**

BSR/ASTM D2657-2007 (R201x), Practice for Heat Fusion Joining of Polyolefin Pipe and Fittings (reaffirmation of ANSI/ASTM D2657-2007 (R2015))

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#### **Reaffirmation**

BSR/ASTM E3115-2017 (R201x), Guide for Capturing Facial Images for Use with Facial Recognition Systems (reaffirmation of ANSI/ASTM E3115-2017)

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#### **Reaffirmation**

BSR/ASTM E3148-2018 (R201x), Guide for Postmortem Facial Image Capture (reaffirmation of ANSI/ASTM E3148-2018)

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#### **Reaffirmation**

BSR/ASTM F1488-2014 (R201x), Specification for Coextruded Composite Pipe (reaffirmation of ANSI/ASTM F1488-2014 (2019))

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#### **Reaffirmation**

BSR/ASTM F1759-1997 (R201x), Practice for Design of High-Density Polyethylene (HDPE) Manholes for Subsurface Applications (reaffirmation of ANSI/ASTM F1759-1997 (2018))

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#### **Revision**

BSR/ASTM E2881-202x, Test Method for Extraction and Derivatization of Vegetable Oils and Fats from Fire Debris and Liquid Samples with Analysis by Gas Chromatography-Mass Spectrometry (revision of ANSI/ASTM E2881-2018)

<https://www.astm.org/get-involved/technical-committees/ansi-review>

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#### **Revision**

BSR/ASTM E2927-201x, Test Method for Determination of Trace Elements in Soda-Lime Glass Samples Using Laser Ablation Inductively Coupled Plasma Mass Spectrometry for Forensic Comparisons (revision of ANSI/ASTM E2927-2016)

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#### **Revision**

BSR/ASTM E2997-201x, Test Method for Analysis of Biodiesel Products by Gas Chromatography-Mass Spectrometry (revision of ANSI/ASTM E2997-2016)

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#### Revision

BSR/ASTM E3197-201x, Terminology Relating to Examination of Fire Debris (revision of ANSI/ASTM E3197-2020)

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#### Revision

BSR/ASTM F441-201x, Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80 (revision of ANSI/ASTM F441/F441M-2020)

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#### Revision

BSR/ASTM F442-201x, Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe (SDRPR) (revision of ANSI/ASTM F442/F442M-2020)

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#### Revision

BSR/ASTM F876-201x, Specification for Crosslinked Polyethylene (PEX) Tubing (revision of ANSI/ASTM F876-2022)

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#### Revision

BSR/ASTM F877-201x, Specification for Crosslinked Polyethylene (PEX) Hot- and Cold-Water Distribution Systems (revision of ANSI/ASTM F877-2022)

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#### Revision

BSR/ASTM F1281-201x, Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe (revision of ANSI/ASTM F1281-2017 (R2021))

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### ASTM (ASTM International)

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#### Revision

BSR/ASTM F1282-201x, Specification for Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe (revision of ANSI/ASTM F1282-2017)

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#### Revision

BSR/ASTM F1483-201x, Specification for Oriented Poly(Vinyl Chloride), PVC-O, Pressure Pipe (revision of ANSI/ASTM F1483-2017)

<https://www.astm.org/get-involved/technical-committees/ansi-review>

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## Comment Deadline: February 20, 2023

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#### **Revision**

BSR/ASTM F1807-201x, Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring, or Alternate Stainless Steel Clamps, for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing (revision of ANSI/ASTM F1807-2019B)

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#### **Revision**

BSR/ASTM F1960-201x, Specification for Cold Expansion Fittings with PEX Reinforcing Rings for Use with Cross-linked Polyethylene (PEX) and Polyethylene of Raised Temperature (PE-RT) Tubing (revision of ANSI/ASTM F1960-2022)

<https://www.astm.org/get-involved/technical-committees/ansi-review>

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#### **Revision**

BSR/ASTM F1970-201x, Specification for Special Engineered Fittings, Appurtenances or Valves for use in Poly (Vinyl Chloride) (PVC) or Chlorinated Poly(Vinyl Chloride) (CPVC) Systems (revision of ANSI/ASTM F1970-2022)

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#### **Revision**

BSR/ASTM F2080-201x, Specification for Cold-Expansion Fittings with Metal Compression-Sleeves for Crosslinked Polyethylene (PEX) Pipe and SDR9 Polyethylene of Raised Temperature (PE-RT) Pipe (revision of ANSI/ASTM F2080-2019)

<https://www.astm.org/get-involved/technical-committees/ansi-review>

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#### **Revision**

BSR/ASTM F2145-201x, Specification for Polyamide 11 (PA 11) and Polyamide 12 (PA12) Mechanical Fittings for Use on Outside Diameter Controlled Polyamide 11 and Polyamide 12 Pipe and Tubing (revision of ANSI/ASTM F2145-2013 (R2018))

<https://www.astm.org/get-involved/technical-committees/ansi-review>

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#### **Revision**

BSR/ASTM F2159-201x, Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring, or Alternate Stainless Steel Clamps for SDR9 Crosslinked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing (revision of ANSI/ASTM F2159-2021)

<https://www.astm.org/get-involved/technical-committees/ansi-review>

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#### **Revision**

BSR/ASTM F2389-201x, Specification for Pressure-rated Polypropylene (PP) Piping Systems (revision of ANSI/ASTM F2389-2021)

<https://www.astm.org/get-involved/technical-committees/ansi-review>

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#### **Revision**

BSR/ASTM F2769-201x, Specification for Polyethylene of Raised Temperature (PE-RT) Plastic Hot and Cold-Water Tubing and Distribution Systems (revision of ANSI/ASTM F2769-2022)

<https://www.astm.org/get-involved/technical-committees/ansi-review>

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#### **Revision**

BSR/ASTM F2806-201x, Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe (Metric SDR-PR) (revision of ANSI/ASTM F2806-2020)

<https://www.astm.org/get-involved/technical-committees/ansi-review>

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#### **Revision**

BSR/ASTM F3253-201x, Specification for Crosslinked Polyethylene (PEX) Tubing with Oxygen Barrier for Hot- and Cold-Water Hydronic Distribution Systems (revision of ANSI/ASTM F3253-2019)

<https://www.astm.org/get-involved/technical-committees/ansi-review>

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## Comment Deadline: February 20, 2023

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#### Revision

BSR/ASTM F3347-201x, Specification for Metal Press Insert Fittings with Factory Assembled Stainless Steel Press Sleeve for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing (revision of ANSI/ASTM F3347-2022)

<https://www.astm.org/get-involved/technical-committees/ansi-review>

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#### Revision

BSR/ASTM F3348-201x, Specification for Plastic Press Insert Fittings with Factory Assembled Stainless Steel Press Sleeve for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing (revision of ANSI/ASTM F3348-2022)

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#### Revision

BSR/ASTM F3539-201x, Practice for Creation of Walkway Tribometer Interlaboratory Study Reports and Test Procedures (revision of ANSI/ASTM F3539-2022)

<https://www.astm.org/get-involved/technical-committees/ansi-review>

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#### Withdrawal

ANSI/ASTM D4756-2015 (R2021), Practice for Installation of Rigid Poly(Vinyl Chloride) (PVC) Siding and Soffit (withdrawal of ANSI/ASTM D4756-2015 (R2021))

<https://www.astm.org/get-involved/technical-committees/ansi-review>

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## Comment Deadline: February 20, 2023

### **AWS (American Welding Society)**

8669 NW 36th Street, Suite 130, Miami, FL 33166-6672 | [jrosario@aws.org](mailto:jrosario@aws.org), [www.aws.org](http://www.aws.org)

#### ***New Standard***

BSR/AWS C4.9/C4.9M-202x, Recommended Practices for Oxyacetylene Cutting of Steel (new standard)

This recommended practice for oxyacetylene cutting includes general procedures to be used in conjunction with oxyacetylene equipment and the latest safety recommendations. If not found in this recommended practice, lists of ancillary equipment are available from individual manufacturers.

Single copy price: \$25.00

Obtain an electronic copy from: [jrosario@aws.org](mailto:jrosario@aws.org)

Order from: Jennifer Rosario; [jrosario@aws.org](mailto:jrosario@aws.org)

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

### **VITA (VMEbus International Trade Association (VITA))**

929 W. Portobello Avenue, Mesa, AZ 85210 | [jing.kwok@vita.com](mailto:jing.kwok@vita.com), [www.vita.com](http://www.vita.com)

#### ***New Standard***

BSR/VITA 62.1-202x, Three Phase High-Voltage Power Supply Front-End in a 3U Plug-In Module Standard (new standard)

This standard provides requirements for a Three Phase High-Voltage Power Supply Front-End in a 3U Plug-In Module that can be used to power a VPX chassis in the VITA 62 family of standards. The Plug-In Module will fit within the standard envelope defined for VPX Plug-In Modules in the VITA 48.0 standards.

Single copy price: \$25.00

Obtain an electronic copy from: [admin@vita.com](mailto:admin@vita.com)

Send comments (copy [psa@ansi.org](mailto:psa@ansi.org)) to: [admin@vita.com](mailto:admin@vita.com)

## Comment Deadline: March 7, 2023

### **ULSE (UL Standards & Engagement)**

12 Laboratory Drive, Research Triangle Park, NC 27709-3995 | [Doreen.Stocker@ul.org](mailto:Doreen.Stocker@ul.org), <https://ulse.org/>

#### ***National Adoption***

BSR/UL 62841-3-5-202x, Standard for Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 3-5: Particular requirements for transportable band saws (identical national adoption of IEC 62841-3-5)

Adoption of the First Edition of IEC 62841-3-5, Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 3-5: Particular requirements for transportable band saws, as the First Edition of UL 62841-3-5 with no deviations.

Single copy price: Free

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

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

## Comment Deadline: March 7, 2023

### ULSE (UL Standards & Engagement)

12 Laboratory Drive, Research Triangle Park, NC 27709-3995 | [Doreen.Stocker@ul.org](mailto:Doreen.Stocker@ul.org), <https://ulse.org/>

#### *National Adoption*

BSR/UL 62841-4-5-202x, Standard for Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 4-5: Particular requirements for grass shears (identical national adoption of IEC 62841-4-5)

Adoption of the First Edition of IEC 62841-4-5, Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety –Part 4-5: Particular requirements for grass shears, as the First Edition of UL 62841-4-5 with no deviations.

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

## Project Withdrawn

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

### ULSE (UL Standards & Engagement)

333 Pfungsten Road, Northbrook, IL 60062 | [megan.monsen@ul.org](mailto:megan.monsen@ul.org), <https://ulse.org/>

BSR/UL 2560-202x, Standard for Safety for Emergency Call Systems for Assisted Living and Independent Living Facilities (revision of ANSI/UL 2560-2018)

Send comments (copy [psa@ansi.org](mailto:psa@ansi.org)) to: Questions may be directed to: Megan Monsen; [megan.monsen@ul.org](mailto:megan.monsen@ul.org)

# Final Actions on American National Standards

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

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## **AAMI (Association for the Advancement of Medical Instrumentation)**

901 N. Glebe Road, Suite 300, Arlington, VA 22203 | [jzajac@aami.org](mailto:jzajac@aami.org), [www.aami.org](http://www.aami.org)

### ***New Standard***

ANSI/AAMI/ISO 25539-2-2022, Cardiovascular implants - Endovascular devices - Part 2: Vascular stents (new standard) Final Action Date: 12/29/2022

## **ARESCA (American Renewable Energy Standards and Certification Association)**

256 Farrell Farm Road, Norwich, VT 05055 | [secretary@aresca.us](mailto:secretary@aresca.us), [www.aresca.us](http://www.aresca.us)

### ***National Adoption***

ANSI/ARESCA 61400-5.1-2022, Wind energy generation systems - Part 5: Wind turbine blades - AMD1 (identical national adoption of IEC 61400-5:2020/AMD1:2023) Final Action Date: 12/29/2022

### ***National Adoption***

ANSI/ARESCA 61400-12-1-2022, Wind energy generation systems - Part 12-1: Power performance measurement of electricity producing wind turbines (identical national adoption of IEC 61400-12-1:2023) Final Action Date: 12/29/2022

### ***National Adoption***

ANSI/ARESCA 61400-12-2-2022, Wind energy generation systems - Part 12-2: Power performance of electricity producing wind turbines based on nacelle anemometry (identical national adoption of IEC 61400-12-2:2023) Final Action Date: 12/29/2022

### ***National Adoption***

ANSI/ARESCA 61400-12-3-2022, Wind energy generation systems - Part 12-3: Power Performance - Measurement Based Site Calibration (identical national adoption of IEC 61400-12-3:2023) Final Action Date: 12/29/2022

### ***National Adoption***

ANSI/ARESCA 61400-12-5-2022, Wind energy generation systems - Part 12-5: Power performance - Assessment of obstacles and terrain (identical national adoption of IEC 61400-12-5:2023) Final Action Date: 12/29/2022

### ***National Adoption***

ANSI/ARESCA 61400-12-6-2022, Wind energy generation systems - Part 12-6: Measurement based nacelle transfer function of electricity producing wind turbines (identical national adoption of IEC 61400-12-6:2023) Final Action Date: 12/29/2022

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

180 Technology Parkway, Peachtree Corners, GA 30092 | [mweber@ashrae.org](mailto:mweber@ashrae.org), [www.ashrae.org](http://www.ashrae.org)

### ***Addenda***

ANSI/ASHRAE Addendum 55h-2020, Thermal Environmental Conditions for Human Occupancy (addenda to ANSI/ASHRAE Standard 55-2020) Final Action Date: 12/30/2022

### ***Addenda***

ANSI/ASHRAE Addendum a to Standard 34-2022, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2022) Final Action Date: 12/30/2022

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

180 Technology Parkway, Peachtree Corners, GA 30092 | [rshanley@ashrae.org](mailto:rshanley@ashrae.org), [www.ashrae.org](http://www.ashrae.org)

**Addenda**

ANSI/ASHRAE/IES Addendum c to ANSI/ASHRAE/IES Standard 100-2018, Energy Efficiency in Existing Buildings (addenda to ANSI/ASHRAE/IES Standard 100-2018) Final Action Date: 12/30/2022

**New Standard**

ANSI/ASHRAE Standard 205-2023, Standard Representation of Performance Simulation Data for HVAC&R and Other Facility Equipment (new standard) Final Action Date: 12/30/2022

**Revision**

ANSI/ASHRAE Standard 32.1-2017, Method of Testing for Rating Refrigerated Vending Machines for Sealed Beverages (revision of ANSI/ASHRAE Standard 32.1-2017) Final Action Date: 12/30/2022

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

700 K Street NW, Suite 600, Washington, DC 20001 | [comments@standards.incits.org](mailto:comments@standards.incits.org), [www.incits.org](http://www.incits.org)

**National Adoption**

INCITS/ISO 19115-2:2019/AM1:2022 [2022], Geographic information - Metadata - Part 2: Extensions for acquisition and processing - Amendment 1 (identical national adoption of ISO 19115-2:2019/AM1:2022) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO 19135-1:2015/AM1:2021 [2022], Geographic information - Procedures for item registration - Part 1: Fundamentals - Amendment 1 (identical national adoption of ISO 19135-1:2015/AM1:2021) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO 19105:2022 [2022], Geographic information - Conformance and testing (identical national adoption of ISO 19105:2022 and revision of INCITS/ISO 19105:2000 [R2021]) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO 19111:2019/AM1:2021 [2022], Geographic information - Referencing by coordinates - Amendment 1 (identical national adoption of ISO 19111:2019/AM1:2021) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO 19116:2019/AM1:2021 [2022], Geographic information - Positioning services - Amendment 1 (identical national adoption of ISO 19116:2019/AM1:2021) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO/IEC 2382-37:2022 [2022], Information technology - Vocabulary - Part 37: Biometrics (identical national adoption of ISO/IEC 2382-37:2022 and revision of INCITS/ISO/IEC 2382-37:2017 [2021]) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO/IEC 18033-7:2022 [2022], Information security - Encryption algorithms - Part 7: Tweakable block ciphers (identical national adoption of ISO/IEC 18033-7:2022) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO/IEC 18033-4:2011/AM1:2020 [2022], Information technology - Security techniques - Encryption algorithms - Part 4: Stream ciphers - Amendment 1: ZUC (identical national adoption of ISO/IEC 18033-4:2011/AM1:2020) Final Action Date: 12/28/2022

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

700 K Street NW, Suite 600, Washington, DC 20001 | [comments@standards.incits.org](mailto:comments@standards.incits.org), [www.incits.org](http://www.incits.org)

**National Adoption**

INCITS/ISO/IEC 19785-2:2021 [2022], Information technology - Common Biometric Exchange Formats Framework - Part 2: Biometric registration authority (identical national adoption of ISO/IEC 19785-2:2021 and revision of INCITS/ISO/IEC 19785-2:2006 [R2018], INCITS/ISO/IEC 19785-2:2006/AM 1:2010 [R2020]) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO/IEC 20547-3:2020 [2022], Information technology - Big data reference architecture - Part 3: Reference architecture (identical national adoption of ISO/IEC 20547-3:2020) Final Action Date: 12/29/2022

**National Adoption**

INCITS/ISO/IEC 20897-2:2022 [2022], Information security, cybersecurity and privacy protection - Physically unclonable functions - Part 2: Test and evaluation methods (identical national adoption of ISO/IEC 20897-2:2022) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO/IEC 30137-4:2021 [2022], Information technology - Use of biometrics in video surveillance systems - Part 4: Ground truth and video annotation procedure (identical national adoption of ISO/IEC 30137-4:2021) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO/IEC 39794-9:2021 [2022], Information technology - Extensible biometric data interchange formats - Part 9: Vascular image data (identical national adoption of ISO/IEC 39794-9:2021) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO/IEC 39794-16:2021 [2022], Information technology - Extensible biometric data interchange formats - Part 16: Full body image data (identical national adoption of ISO/IEC 39794-16:2021) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO/IEC 39794-17:2021 [2022], Information technology - Extensible biometric data interchange formats - Part 17: Gait image sequence data (identical national adoption of ISO/IEC 39794-17:2021) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO/IEC 21472:2021 [2022], Information technology - Scenario evaluation methodology for user interaction influence in biometric system performance (identical national adoption of ISO/IEC 21472:2021) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO/IEC 23053:2022 [2022], Framework for Artificial Intelligence (AI) Systems using Machine Learning (ML) (identical national adoption of ISO/IEC 23053:2022) Final Action Date: 12/29/2022

**National Adoption**

INCITS/ISO/IEC 27002:2022 [2022], Information security, cybersecurity and privacy protection - Information security controls (identical national adoption of ISO/IEC 27002:2022 and revision of INCITS/ISO/IEC 27002:2013 [R2019])  
INCITS/ISO/IEC 27002:2013/COR 1:2014 [2018]  
INCITS/ISO/IEC 27002:2013/COR 2:2015 [2018]) Final Action Date: 12/28/2022

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

700 K Street NW, Suite 600, Washington, DC 20001 | [comments@standards.incits.org](mailto:comments@standards.incits.org), [www.incits.org](http://www.incits.org)

**National Adoption**

INCITS/ISO/IEC 27013:2021 [2022], Information security, cybersecurity and privacy protection - Guidance on the integrated implementation of ISO/IEC 27001 and ISO/IEC 20000-1 (identical national adoption of ISO/IEC 27013:2021 and revision of INCITS/ISO/IEC 27013:2015 [2018]) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO/IEC 27070:2021 [2022], Information technology - Security techniques - Requirements for establishing virtualized roots of trust (identical national adoption of ISO/IEC 27070:2021) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO/IEC 27400:2022 [2022], Cybersecurity - IoT security and privacy - Guidelines (identical national adoption of ISO/IEC 27400:2022) Final Action Date: 12/28/2022

**National Adoption**

INCITS/ISO/IEC 38507:2022 [2022], Information technology - Governance of IT - Governance implications of the use of artificial intelligence by organizations (identical national adoption of ISO/IEC 38507:2022) Final Action Date: 12/29/2022

**National Adoption**

INCITS/ISO/IEC 27021:2017/AM1:2021 [2022], Information technology - Security techniques - Competence requirements for information security management systems professionals - Amendment 1: Addition of ISO/IEC 27001:2013 clauses or subclauses to competence requirements (identical national adoption of ISO/IEC 27021:2017/AM1:2021) Final Action Date: 12/28/2022

**NEMA (ASC C50) (National Electrical Manufacturers Association)**

1300 North 17th Street, Suite 900, Rosslyn, VA 22209 | [David.Richmond@nema.org](mailto:David.Richmond@nema.org), [www.nema.org](http://www.nema.org)

**National Adoption**

ANSI NEMA 61800-9-2-2022, Adjustable Speed Drives Electrical Power Drive Systems Part 9-2: Ecodesign for power drive systems, motor starters, power electronics and their driven applications - Energy efficiency indicators for power drive systems and motor starters (identical national adoption of IEC 61800-9-2-2017 Ed. 1) Final Action Date: 12/29/2022

**NSF (NSF International)**

789 N. Dixboro Road, Ann Arbor, MI 48105-9723 | [arose@nsf.org](mailto:arose@nsf.org), [www.nsf.org](http://www.nsf.org)

**Revision**

ANSI/NSF 4-2022 (i33r1), Commercial Cooking, Rethermalization, and Powered Hot Food Holding and Transportation Equipment (revision of ANSI/NSF 4-2020) Final Action Date: 12/22/2022

# Call for Members (ANS Consensus Bodies)

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

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## ANSI Accredited Standards Developer

### INCITS Executive Board – ANSI Accredited SDO and US TAG to ISO/IEC JTC 1, Information Technology

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

The INCITS Executive Board serves as the consensus body with oversight of its 40+ Technical Committees. Additionally, the INCITS Executive Board has the international leadership role as the US Technical Advisory Group (TAG) to ISO/IEC JTC 1, Information Technology.

Membership in the INCITS Executive Board is open to all directly and materially interested parties in accordance with INCITS membership rules. To find out more about participating on the INCITS Executive Board, contact Jennifer Garner at [jgarner@itic.org](mailto:jgarner@itic.org) or visit <http://www.incits.org/participation/membership-info> for more information.

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

- Producer-Software
- Producer-Hardware
- Distributor
- Service Provider
- Users
- Consultants
- Government
- SDO and Consortia Groups
- Academia
- General Interest

## ANSI Accredited Standards Developer

### SCTE (Society of Cable Telecommunications Engineers)

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

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

Membership in the SCTE Standards Program is open to all directly and materially affected parties as defined in SCTE's membership rules and operating procedures.

More information is available at [www.scte.org](http://www.scte.org) or by e-mail from [standards@scte.org](mailto:standards@scte.org).

## **ANSI Accredited Standards Developer**

### **NCPDP - National Council for Prescription Drug Programs**

**Monday, January 9, 2023 through Friday, February 10, 2023**

Enrollment in the **National Council for Prescription Drug Programs (NCPDP) 2023 Consensus Group** opens **Monday, January 9, 2023 and closes at 8:00 p.m. EST on Friday, February 10, 2023**. Information concerning the Consensus Group registration process is available by contacting: Margaret Weiker, National Council for Prescription Drug Programs (NCPDP) | 9240 East Raintree Drive, Scottsdale, AZ 85260 | (480) 477-1000, [mweiker@ncpdp.org](mailto:mweiker@ncpdp.org)

#### **STANDARDS:**

**Audit Transaction Standard** – supports an electronic audit transaction that facilitates requests, responses, and final outcomes transmissions for both “Desk Top” claim audits and for in-store audit notices.

**Batch Standard Subrogation** - provides a uniform approach to efficiently process post-payment subrogation claims and eliminate the numerous custom formats used in the industry today.

**Benefit Integration Standard** - supports the communication of accumulator data (such as deductible and out of pocket) between Benefit Partners to administer integrated benefits for a member.

**Billing Unit Standard** - provides a consistent and well-defined billing unit for use in pharmacy transactions. This results in time savings and accuracy in billing and reimbursement.

**Financial Information Reporting Standard** – provides a process whereby financial information is moved from one PBM to another when a patient changes benefit plans.

**Formulary and Benefit Standard** – provides a standard means for pharmacy benefit payers (including health plans and Pharmacy Benefit Managers) to communicate formulary and benefit information to prescribers via technology vendor systems.

**Manufacturer Rebate Standard** – provides a standardized format for the electronic submission of rebate information from Pharmacy Management Organizations (PMOs) to Pharmaceutical Industry Contracting Organizations (PICOs).

**Medicaid Pharmacy Encounters Reporting** – provides standardization of data content and file layout for reporting of Medicaid Managed Care Organization pharmacy claims to a state agency.

**Medicaid Subrogation Standard** – provides guidelines for the process whereby a Medicaid agency can communicate to a processor for reimbursement. The state has reimbursed the pharmacy provider for covered services and now is pursuing reimbursement from other payers for these services.

**Medical Rebates Data Submission Standard** – provides a standardized format for health plans’ rebate submissions to multiple manufacturers throughout the industry. Implementation of the medical also eliminates the need for manufacturers to create internal mapping processes to standardize unique data formats from each health plan or third party administrator.

### **AMPP (Association for Materials Protection and Performance)**

15835 Park Ten Place, Houston, TX 77084 | [rick.southard@ampp.org](mailto:rick.southard@ampp.org), [www.ampp.org](http://www.ampp.org)

BSR/NACE MR0103/ISO 17945-2016 (R202x), Petroleum, petrochemical and natural gas industries - Metallic materials resistant to sulfide stress cracking in corrosive petroleum refining environments (reaffirm a national adoption ANSI/NACE MR0103/ISO 17945-2016)

### **AWS (American Welding Society)**

8669 NW 36th Street, Suite 130, Miami, FL 33166-6672 | [jrosario@aws.org](mailto:jrosario@aws.org), [www.aws.org](http://www.aws.org)

BSR/AWS B2.1-1-027-202x, Standard Welding Procedure Specification (SWPS) for Self-Shielded Flux Cored Arc Welding of Carbon Steel (M-1 or P-1, Groups 1 and 2), 1/8 inch [3 mm] through 1/2 inch [13 mm] Thick, E71T-11, in the As-Welded Condition, Primarily Plate and Structural Applications (revision of ANSI/AWS B2.1-1-027-2018 (R2022))

**AWS (American Welding Society)**

8669 NW 36th Street, Suite 130, Miami, FL 33166-6672 | [jrosario@aws.org](mailto:jrosario@aws.org), [www.aws.org](http://www.aws.org)

BSR/AWS C4.9/C4.9M-202x, Recommended Practices for Oxyacetylene Cutting of Steel (new standard)

**NEMA (National Electrical Manufacturers Association)**

1300 North 17th Street, Rosslyn, VA 22209 | [Khaled.Masri@nema.org](mailto:Khaled.Masri@nema.org), [www.nema.org](http://www.nema.org)

BSR/NEMA IM 60003-202x, Electrical Insulating Varnish (new standard)

**NEMA (National Electrical Manufacturers Association)**

1300 North 17th Street, Rosslyn, VA 22209 | [Khaled.Masri@nema.org](mailto:Khaled.Masri@nema.org), [www.nema.org](http://www.nema.org)

BSR/NEMA IM 60004-202x, Calendered Aramid Papers Used for Electrical Insulation (new standard)

**VITA (VMEbus International Trade Association (VITA))**

929 W. Portobello Avenue, Mesa, AZ 85210 | [jing.kwok@vita.com](mailto:jing.kwok@vita.com), [www.vita.com](http://www.vita.com)

BSR/VITA 62.1-202x, Three Phase High-Voltage Power Supply Front-End in a 3U Plug-In Module Standard (new standard)

# American National Standards (ANS) Announcements

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## Corrections

### CSA - CSA America Standards Inc.

#### BSR/CSA Z741-2012 (R202x) public review and comment

The 12/16/2022, Call for Comment notice should have included the following e-mail address for commenting on:  
BSR/CSA Z741-2012 (R202x), Geological storage of carbon dioxide, (reaffirmation of ANSI/CSA Z741-2012 (R2018))  
Please direct inquiries to: [ansi.contact@csagroup.org](mailto:ansi.contact@csagroup.org)

# American National Standards (ANS) Process

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

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

### Please visit ANSI's website ([www.ansi.org](http://www.ansi.org))

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

# American National Standards Under Continuous Maintenance

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

The standard shall be maintained by an accredited standards developer. A documented program for periodic publication of revisions shall be established by the standards developer. Processing of these revisions shall be in accordance with these procedures. The published standard shall include a clear statement of the intent to consider requests for change and information on the submittal of such requests. Procedures shall be established for timely, documented consensus action on each request for change and no portion of the standard shall be excluded from the revision process. In the event that no revisions are issued for a period of four years, action to reaffirm or withdraw the standard shall be taken in accordance with the procedures contained in the ANSI Essential Requirements. The Executive Standards Council (ExSC) has determined that for standards maintained under the Continuous Maintenance option, separate PINS announcements are not required. The following ANSI Accredited Standards Developers have formally registered standards under the Continuous Maintenance option.

AAMI (Association for the Advancement of Medical Instrumentation)  
 AARST (American Association of Radon Scientists and Technologists)  
 AGA (American Gas Association)  
 AGSC (Auto Glass Safety Council)  
 ASC X9 (Accredited Standards Committee X9, Incorporated)  
 ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)  
 ASME (American Society of Mechanical Engineers)  
 ASTM (ASTM International)  
 GBI (Green Building Initiative)  
 HL7 (Health Level Seven)  
 Home Innovation (Home Innovation Research Labs)  
 IES (Illuminating Engineering Society)  
 ITI (InterNational Committee for Information Technology Standards)  
 MHI (Material Handling Industry)  
 NBBPVI (National Board of Boiler and Pressure Vessel Inspectors)  
 NCPDP (National Council for Prescription Drug Programs)  
 NEMA (National Electrical Manufacturers Association)  
 NFRC (National Fenestration Rating Council)  
 NISO (National Information Standards Organization)  
 NSF (NSF International)  
 PRCA (Professional Ropes Course Association)  
 RESNET (Residential Energy Services Network, Inc.)  
 SAE (SAE International)  
 TCNA (Tile Council of North America)  
 TIA (Telecommunications Industry Association)  
 ULSE (UL Standards & Engagement)

To obtain additional information with regard to these standards, including contact information at the ANSI Accredited Standards Developer, please visit ANSI Online at [www.ansi.org/asd](http://www.ansi.org/asd), select "American National Standards Maintained Under Continuous Maintenance." Questions? [psa@ansi.org](mailto:psa@ansi.org).

# ANSI-Accredited Standards Developers (ASD) Contacts

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

## AAMI

Association for the Advancement of  
Medical Instrumentation  
901 N. Glebe Road, Suite 300  
Arlington, VA 22203  
[www.aami.org](http://www.aami.org)  
Jill Zajac  
[jzajac@aami.org](mailto:jzajac@aami.org)

## ACCA

Air Conditioning Contractors of America  
1330 Braddock Place, Suite 350  
Alexandria, VA 22314  
[www.acca.org](http://www.acca.org)  
David Bixby  
[david.bixby@acca.org](mailto:david.bixby@acca.org)

## AMPP

Association for Materials Protection and  
Performance  
15835 Park Ten Place  
Houston, TX 77084  
[www.ampp.org](http://www.ampp.org)  
Richard Southard  
[rick.southard@ampp.org](mailto:rick.southard@ampp.org)

## ARESCA

American Renewable Energy Standards  
and Certification Association  
256 Farrell Farm Road  
Norwich, VT 05055  
[www.aresca.us](http://www.aresca.us)  
George Kelly  
[secretary@aresca.us](mailto:secretary@aresca.us)

## ASHRAE

American Society of Heating, Refrigerating  
and Air-Conditioning Engineers, Inc.  
180 Technology Parkway  
Peachtree Corners, GA 30092  
[www.ashrae.org](http://www.ashrae.org)  
Carmen King  
[cking@ashrae.org](mailto:cking@ashrae.org)  
Mark Weber  
[mweber@ashrae.org](mailto:mweber@ashrae.org)  
Ryan Shanley  
[rshanley@ashrae.org](mailto:rshanley@ashrae.org)  
Tanisha Meyers-Lisle  
[tmlisle@ashrae.org](mailto:tmlisle@ashrae.org)

## ASME

American Society of Mechanical Engineers  
Two Park Avenue, M/S 6-2B  
New York, NY 10016  
[www.asme.org](http://www.asme.org)  
Terrell Henry  
[ansibox@asme.org](mailto:ansibox@asme.org)

## ASTM

ASTM International  
100 Barr Harbor Drive  
West Conshohocken, PA 19428  
[www.astm.org](http://www.astm.org)  
Laura Klineburger  
[accreditation@astm.org](mailto:accreditation@astm.org)

## AWS

American Welding Society  
8669 NW 36th Street, Suite 130  
Miami, FL 33166  
[www.aws.org](http://www.aws.org)  
Jennifer Rosario  
[jrosario@aws.org](mailto:jrosario@aws.org)

## AWWA

American Water Works Association  
6666 W. Quincy Avenue  
Denver, CO 80235  
[www.awwa.org](http://www.awwa.org)  
Paul Olson  
[polson@awwa.org](mailto:polson@awwa.org)

## ITI (INCITS)

InterNational Committee for Information  
Technology Standards  
700 K Street NW, Suite 600  
Washington, DC 20001  
[www.incits.org](http://www.incits.org)  
Deborah Spittle  
[comments@standards.incits.org](mailto:comments@standards.incits.org)

## NEMA

National Electrical Manufacturers  
Association  
1300 North 17th Street  
Rosslyn, VA 22209  
[www.nema.org](http://www.nema.org)  
Khaled Masri  
[Khaled.Masri@nema.org](mailto:Khaled.Masri@nema.org)

## NEMA (ASC C50)

National Electrical Manufacturers  
Association  
1300 North 17th Street, Suite 900  
Rosslyn, VA 22209  
[www.nema.org](http://www.nema.org)  
David Richmond  
[David.Richmond@nema.org](mailto:David.Richmond@nema.org)

## NSF

NSF International  
789 N. Dixboro Road  
Ann Arbor, MI 48105  
[www.nsf.org](http://www.nsf.org)  
Allan Rose  
[arose@nsf.org](mailto:arose@nsf.org)

## ULSE

UL Standards & Engagement  
12 Laboratory Drive  
Research Triangle Park, NC 27709  
<https://ulse.org/>  
Doreen Stocker  
[Doreen.Stocker@ul.org](mailto:Doreen.Stocker@ul.org)

## ULSE

UL Standards & Engagement  
333 Pflingsten Road  
Northbrook, IL 60062  
<https://ulse.org/>  
Lisette Delgado  
[Lisette.delgado@ul.org](mailto:Lisette.delgado@ul.org)

## VITA

VMEbus International Trade Association  
(VITA)  
929 W. Portobello Avenue  
Mesa, AZ 85210  
[www.vita.com](http://www.vita.com)  
Jing Kwok  
[jing.kwok@vita.com](mailto:jing.kwok@vita.com)

# ISO & IEC Draft International Standards



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

## COMMENTS

Comments regarding ISO documents should be sent to ANSI's ISO Team ([isot@ansi.org](mailto:isot@ansi.org)); comments on ISO documents must be submitted electronically in the approved ISO template and as a Word document as other formats will not be accepted.

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

## ORDERING INSTRUCTIONS

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

## ISO Standards

### Anaesthetic and respiratory equipment (TC 121)

ISO 10524-1:2018/DAmD 1, Pressure regulators for use with medical gases - Part 1: Pressure regulators and pressure regulators with flow-metering devices - Amendment 1 - 3/18/2023, \$40.00

### Building environment design (TC 205)

ISO 11855-6:2018/DAmD 1, Building environment design - Design, dimensioning, installation and control of embedded radiant heating and cooling systems - Part 6: Control - Amendment 1 - 3/18/2023, \$33.00

### Fasteners (TC 2)

ISO/DIS 3506-7, Fasteners - Mechanical properties of corrosion-resistant stainless-steel fasteners - Part 7: Flat washers with specified grades and property classes - 3/19/2023, \$62.00

### Fluid power systems (TC 131)

ISO/DIS 11619, Pneumatic fluid power - Polyurethane and polyamide tubings for use primarily in pneumatic installations - Dimensions and specification - 3/18/2023, \$62.00

### Gas cylinders (TC 58)

ISO/DIS 22435, Gas cylinders - Cylinder valves with integrated pressure regulators - Specification and type testing - 3/20/2023, \$98.00

### Glass in building (TC 160)

ISO/DIS 23237.2, Glass in building - laminated solar photovoltaic glass for use in buildings - Light transmittance measurement method - 1/12/2023, \$46.00

### Implants for surgery (TC 150)

ISO/DIS 5832-1, Implants for surgery - Metallic materials - Part 1: Wrought stainless steel - 3/23/2023, \$40.00

ISO/DIS 5832-4, Implants for surgery - Metallic materials - Part 4: Cobalt-chromium-molybdenum casting alloy - 3/16/2023, \$33.00

ISO/DIS 5832-7, Implants for surgery - Metallic materials - Part 7: Forgeable and cold-formed cobalt-chromium-nickel-molybdenum-iron alloy - 3/17/2023, \$33.00

ISO/DIS 5832-11, Implants for surgery - Metallic materials - Part 11: Wrought titanium 6-aluminium 7-niobium alloy - 3/17/2023, \$33.00

### Refrigeration (TC 86)

ISO 21922:2021/DAmD 1, Refrigerating systems and heat pumps - Valves - Requirements, testing and marking - Amendment 1 - 3/16/2023, \$46.00

ISO 16494-1:2022/DAmD 1, Heat recovery ventilators and energy recovery ventilators - Method of test for performance - Part 1: Development of metrics for evaluation of energy related performance - Amendment 1 - 3/18/2023, \$53.00

### Road vehicles (TC 22)

ISO/DIS 11451-1, Road vehicles - Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 1: General principles and terminology - 3/20/2023, \$107.00

### Technical systems and aids for disabled or handicapped persons (TC 173)

ISO/DIS 6273, Assistive products - Accessibility guidelines in the survey of user needs of persons with impaired sensory functions for assistive products and services - 3/18/2023, \$77.00

**Timber structures (TC 165)**

ISO/DIS 5257, Bamboo Structures - Engineered bamboo products  
- Test methods for determination of mechanical properties  
using small size specimens - 3/23/2023, \$67.00

**Valves (TC 153)**

ISO/DIS 5115.2, Industrial valves - Part-turn valve actuation -  
1/12/2023, \$88.00

**ISO/IEC JTC 1, Information Technology**

ISO/IEC 18013-4:2019/DAmD 1, Personal identification - ISO-  
compliant driving licence - Part 4: Test methods - Amendment  
1: Test methods for compact encoding - 3/18/2023, \$98.00

**IEC Standards****Audio, video and multimedia systems and equipment (TC 100)**

100/3870/CD, IEC TR 63481 ED1: PW TR 100-41 Accessibility  
Goals and Needs with an exemplar of use with a household  
voice control system, 03/24/2023

**Cables, wires, waveguides, r.f. connectors, and accessories for communication and signalling (TC 46)**

46/927/FDIS, IEC 60966-3-3 ED1: Radio frequency and coaxial  
cable assemblies - Part 3-3: Detail specification for semi-flexible  
cable assemblies (jumper), Frequency range up to 18GHz, Type  
50-141 semi-flexible coaxial cable, 02/10/2023

46/928/FDIS, IEC 60966-3-4 ED1: Radio frequency and coaxial  
cable assemblies - Part 3-4: Detail specification for semi-flexible  
cable assemblies (jumper), Frequency range up to 6GHz, Type  
50-141 semi-flexible coaxial cable, 02/10/2023

46F/634/CDV, IEC 61169-10 ED1: Radio-frequency connectors.  
Part 10: R.F. coaxial connectors with inner diameter of outer  
conductor 3 mm (0.12 in) with snap-on coupling - Characteristic  
impedance 50 ohms (Type SMB), 03/24/2023

**Electrical installations of ships and of mobile and fixed offshore units (TC 18)**

18/1810/FDIS, IEC/IEEE 80005-1/AMD2 ED2: Amendment 2 -  
Utility connections in port - Part 1: High voltage shore  
connection (HVSC) systems - General requirements,  
02/10/2023

**Environmental standardization for electrical and electronic products and systems (TC 111)**

111/689/FDIS, IEC 62321-12 ED1: Determination of certain  
substances in electrotechnical products - Part 12:  
Simultaneous determination - Polybrominated biphenyls,  
polybrominated diphenyl ethers and phthalates in polymers by  
gas chromatography-mass spectrometry, 02/10/2023

**Fibre optics (TC 86)**

86A/2277/FDIS, IEC 60794-2-10 ED3: Optical fibre cables - Part  
2-10: Indoor optical fibre cables - Family specification for  
simplex and duplex cables, 02/10/2023

**Flat Panel Display Devices (TC 110)**

110/1489/CD, IEC 62629-62-12 ED1: 3D displays - Part 62-12:  
Measurement methods for virtual-image type - Image Quality,  
02/24/2023

**Industrial-process measurement and control (TC 65)**

65C/1199/FDIS, IEC 61158-1 ED3: Industrial communication  
networks - Fieldbus specifications - Part 1: Overview and  
guidance for the IEC 61158 and IEC 61784 series,  
02/10/2023

65C/1200/FDIS, IEC 61158-2 ED7: Industrial communication  
networks - Fieldbus specifications - Part 2: Physical layer  
specification and service definition, 02/10/2023

65C/1201/FDIS, IEC 61158-3-X ED3: Industrial communication  
networks - Fieldbus specifications - Part 3-X: Data-link layer  
service definition - Type X elements, 02/10/2023

65C/1202/FDIS, IEC 61158-4-X ED5: Industrial communication  
networks - Fieldbus specifications - Part 4-X: Data-link layer  
protocol specification - Type X elements, 02/10/2023

65C/1203/FDIS, IEC 61158-5-X ED5: Industrial communication  
networks - Fieldbus specifications - Part 5-X: Application layer  
service definition - Type X elements, 02/10/2023

65C/1204/FDIS, IEC 61158-6-X ED5: Industrial communication  
networks - Fieldbus specifications - Part 6-X: Application layer  
protocol specification - Type X elements, 02/10/2023

65C/1205/FDIS, IEC 61158-X-27 ED1: Industrial communication  
networks - Fieldbus specifications - Type 27 elements,  
02/10/2023

65C/1206/FDIS, IEC 61158-X-28 ED1: Industrial communication  
networks - Fieldbus specifications and Profiles - Type 28  
elements, 02/10/2023

65C/1208/FDIS, IEC 61784-1-22 ED1: Industrial networks -  
Profiles - Part 1-22: Fieldbus profiles - Communication Profile  
Family 22, 02/10/2023

65C/1207/FDIS, IEC 61784-1-X ED1: Industrial networks -  
Profiles - Part 1-X: Fieldbus profiles, 02/10/2023

65C/1210/FDIS, IEC 61784-2-19 ED1: Industrial networks -  
Profiles - Part 2-19: Additional real-time fieldbus profiles based  
on ISO/IEC/IEEE 8802-3 - CPF 19, 02/10/2023

65C/1209/FDIS, IEC 61784-2-X ED1: Industrial networks -  
Profiles - Part 2-X: Additional real-time fieldbus profiles based  
on ISO/IEC/IEEE 8802-3, 02/10/2023

**Safety of Electronic Equipment within the Field of  
Audio/Video, Information Technology and Communication  
Technology (TC 108)**

108/800/FDIS, IEC 62368-1 ED4: Audio/video, information and communication technology equipment - Part 1: Safety requirements, 02/10/2023

108/801/CD, IEC 63315 ED1: Audio/Video, Information and Communication Technology Equipment - Safety - DC power transfer between ICT equipment ports using ICT cabling at - 60 Vd.c., 03/24/2023

**Surge arresters (TC 37)**

37B/230/CDV, IEC 61643-332 ED1: Components for low-voltage surge protection - Part 332: Selection and application principles for metal oxide varistors (MOV), 03/24/2023



# Newly Published ISO Standards

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

## Industrial automation systems and integration (TC 184)

ISO 10303-41:2022, Industrial automation systems and integration - Product data representation and exchange - Part 41: Integrated generic resource: Fundamentals of product description and support, FREE

ISO 10303-42:2022, Industrial automation systems and integration - Product data representation and exchange - Part 42: Integrated generic resource: Geometric and topological representation, \$73.00

ISO 10303-43:2022, Industrial automation systems and integration - Product data representation and exchange - Part 43: Integrated generic resource: Representation structures, \$73.00

ISO 10303-44:2022, Industrial automation systems and integration - Product data representation and exchange - Part 44: Integrated generic resource: Product structure configuration, \$73.00

ISO 10303-46:2022, Industrial automation systems and integration - Product data representation and exchange - Part 46: Integrated generic resource: Visual presentation, \$73.00

ISO 10303-47:2022, Industrial automation systems and integration - Product data representation and exchange - Part 47: Integrated generic resource: Shape variation tolerances, \$73.00

ISO 10303-59:2022, Industrial automation systems and integration - Product data representation and exchange - Part 59: Integrated generic resource: Quality of product shape data, \$73.00

ISO 10303-101:2022, Industrial automation systems and integration - Product data representation and exchange - Part 101: Integrated application resource: Draughting, \$73.00

ISO 10303-113:2022, Industrial automation systems and integration - Product data representation and exchange - Part 113: Integrated application resource: Mechanical features, \$73.00

ISO 10303-242:2022, Industrial automation systems and integration - Product data representation and exchange - Part 242: Application protocol: Managed model-based 3D engineering, \$175.00

ISO 10303-517:2022, Industrial automation systems and integration - Product data representation and exchange - Part 517: Application interpreted construct: Mechanical design geometric presentation, \$73.00

## Welding and allied processes (TC 44)

ISO 25901-2:2022, Welding and allied processes - Vocabulary - Part 2: Health and safety, \$48.00

## ISO Technical Specifications

### Industrial automation systems and integration (TC 184)

ISO/TS 10303-410:2022, Industrial automation systems and integration - Product data representation and exchange - Part 410: Application module: AP210 electronic assembly interconnect and packaging design, \$73.00

ISO/TS 10303-442:2022, Industrial automation systems and integration - Product data representation and exchange - Part 442: Application module: AP242 managed model based 3D engineering, \$73.00

ISO/TS 10303-1004:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1004: Application module: Elemental geometric shape, \$73.00

ISO/TS 10303-1005:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1005: Application module: Elemental topology, \$73.00

ISO/TS 10303-1006:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1006: Application module: Foundation representation, \$73.00

ISO/TS 10303-1027:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1027: Application module: Contextual shape positioning, \$73.00

ISO/TS 10303-1104:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1104: Application module: Specified product, \$73.00

ISO/TS 10303-1628:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1628: Application module: Design product data management, \$73.00

ISO/TS 10303-1748:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1748: Application module: Stratum non planar shape, \$73.00

ISO/TS 10303-1767:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1767: Application module: Composite constituent shape, \$73.00

ISO/TS 10303-1770:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1770: Application module: Part and zone laminate tables, \$73.00

ISO/TS 10303-1815:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1815: Application module: Mating structure, \$73.00

ISO/TS 10303-1819:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1819: Application module: Tessellated geometry, \$73.00

ISO/TS 10303-1828:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1828: Application module: Wiring harness assembly design, \$73.00

ISO/TS 10303-1830:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1830: Application module: Edge based topological representation with length constraint, \$73.00

ISO/TS 10303-1838:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1838: Application module: Annotated 3D model equivalence criteria, \$73.00

ISO/TS 10303-1844:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1844: Application module: General design connectivity, \$73.00

ISO/TS 10303-1846:2022, Industrial automation systems and integration - Product data representation and exchange - Part 1846: Application module: Mechanical design features and requirements, \$73.00

ISO/TS 10303-4442:2022, Industrial automation systems and integration - Product data representation and exchange - Part 4442: Domain model: Managed model based 3D engineering domain, \$73.00

ISO/TS 10303-4443:2022, Industrial automation systems and integration - Product data representation and exchange - Part 4443: Domain model: For modelling and simulation information in a collaborative systems engineering context (MoSSEC), \$73.00

# Registration of Organization Names in the United States

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The Procedures for Registration of Organization Names in the United States of America (document ISSB 989) require that alphanumeric organization names be subject to a 90-day Public Review period prior to registration. For further information, please contact the Registration Coordinator at (212) 642-4975.

When organization names are submitted to ANSI for registration, they will be listed here alphanumerically.

Alphanumeric names appearing for the first time are printed in bold type. Names with confidential contact information, as requested by the organization, list only public review dates.

## Public Review

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

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

# Proposed Foreign Government Regulations

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## Call for Comment

U.S. manufacturers, exporters, trade associations, U.S. domiciled standards development organizations and conformity assessment bodies, consumers, or U.S. government agencies may be interested in proposed foreign technical regulations notified by Member countries of the World Trade Organization (WTO). In accordance with the WTO Agreement on Technical Barriers to Trade (TBT Agreement), Members are required to notify to the WTO Secretariat in Geneva, Switzerland proposed technical regulations that may significantly affect trade. In turn, the Secretariat circulates and makes available these notifications. The purpose of the notification requirement is to provide global trading partners with an opportunity to review and comment on the regulations before they become final.

The USA Enquiry Point for the WTO TBT Agreement is located at the National Institute of Standards and Technology (NIST) in the Standards Coordination Office (SCO). The Enquiry Point relies on the WTO's ePing SPS&TBT platform (<https://epingalert.org/>) to distribute the notified proposed foreign technical regulations (notifications) and their full-texts available to U.S. stakeholders. Interested U.S. parties can register with ePing to receive e-mail alerts when notifications are added from countries and industry sectors of interest to them. To register for ePing, please visit: <https://epingalert.org/>

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

For further information about the USA TBT Enquiry Point, please visit:

<https://www.nist.gov/standardsgov/usa-wto-tbt-enquiry-point>

Contact the USA TBT Enquiry Point at (301) 975-2918; E [usatbtep@nist.gov](mailto:usatbtep@nist.gov) or [notifyus@nist.gov](mailto:notifyus@nist.gov)

### 1-2.2 Tests Inside and Outside the Scope of ASME PTC 22

(b) environmental compliance testing for gas turbines for stack emissions and sound levels. Procedures developed by regulatory agencies, ANSI, other ASME PTC Committees, [ISO Committees](#), or other equivalent standard, are available to govern the conduct of such testing.

(d) performance of auxiliary systems of the gas turbine power plant, such as inlet cooling devices, fuel gas booster compressors, [fuel delivery systems](#), etc.

**Table 1-2.2-1 Gas Turbine Extended Scope**

| Gas Turbine Extended Scope                  | Appropriate Test Code | Comments                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">Extraction/Injection fluids</a> | PTC 22                | <a href="#">Extraction fluids for process and</a> <del>h</del> injection fluids for emission control and/or power augmentation corrections within PTC 22 can be applied, provided the gas turbine test boundary does not include components that will require corrections that are not considered in PTC 22. |

### 1-3.1 Absolute Performance Test Uncertainty

... The overall test uncertainty will be unique for each Code test because of the differences in the scope of supply, fuels used, turbine sensitivities, [grade and number of](#) instruments selected, and driven equipment characteristics.

## 2-2 DEFINITIONS

*aero-derivative gas turbine*: modified version of aircraft gas turbine engine used for electrical power generation [and mechanical applications](#).

*test boundary*: thermodynamic control volume defined by the scope of the test, and for which the mass and energy flows are determined. Depending on the test [objectives](#), more than one boundary may be applicable.

~~Definition of the test boundary or boundaries is an extremely important visual tool that aids in understanding the scope of test and the required measurements.~~

**Table 2-2.1-1 Symbols**

| Symbol             | Description                                                         | Units                                                        |                               |
|--------------------|---------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------|
|                    |                                                                     | US Customary                                                 | SI                            |
| $C_p$              | Specific heat capacity at constant pressure                         | Btu/(lb <del>m</del> *°R)                                    | kJ/(kg*K)                     |
| SH                 | Sensible heat                                                       | Btu/lb                                                       | kJ/kg <del>h</del>            |
| $y$                | Height difference                                                   | ft                                                           | <del>M</del> m                |
| $\Delta_f H^\circ$ | Heat of formation                                                   | Btu/lb <del>m</del> mol                                      | J/mol                         |
| $\Delta P$         | Differential pressure                                               | lb <del>f</del> /in <sup>2</sup> (psi), in. H <sub>2</sub> O | Pa, mbar, mm H <sub>2</sub> O |
| $\theta$           | <a href="#">Sensitivity coefficient for uncertainty calculation</a> |                                                              |                               |

GENERAL NOTE: Unless otherwise noted, "lb" is "lbm".

### 3-1.5 Test Boundary and Required Measurements

The test boundary is an accounting concept used to define the streams that shall be measured to determine performance. All energy streams that cross the boundary shall be identified. [Definition of the test boundary or boundaries is an extremely important visual tool that aids in understanding the scope of test, the required measurements, and the proper accounting of mass and energy flows.](#)

#### Table 3-1.5.2-1 Required Measurements

NOTE:

TENTATIVE  
SUBJECT TO REVISION OR WITHDRAWAL  
Specific Authorization Required for Reproduction or Quotation  
ASME Standards and Certification

- (1) The measurements of heat losses from generators, lube oil coolers, turbine enclosures, rotor air coolers, etc., where heat crosses the test boundary, is only necessary for exhaust flow or energy test. Estimated values may be used in lieu of actual measurements [upon agreement of the parties to the test](#).

### 3-3.3.1 Operating Mode.

...It is mandatory that the control constants and inputs affecting turbine performance be recorded during the test. [These constants serve as a basis of the performance test, and as such the results obtained through performance testing are only valid for the constants used during testing.](#)

### 4-1.4.1 Data Collection and Calculation Systems.

...The system should have the ability to locate and eliminate spurious data from the average. [Data eliminated shall be subject to mutual agreement of the parties to the test.](#) The system should also have the ability to plot the test data and each instrument reading over time to look for trends and outliers.

### 4-4.4 Gas Fuel Composition

The preferred solution for the determination of the gas composition is the analysis in a laboratory using methods and standards that are traceable to U.S. National Institute of Standards and Technology (NIST), [or other internationally recognized standards, such as ISO, DIN VDI](#). Increasing the number of laboratories where fuel samples are analyzed will reduce the correlated component of the measurement uncertainty. Further reduction of the random part of the uncertainty may be achieved by increasing the frequency of the fuel sample collection. Prior to the onset of any activities all parties to the test shall agree upon the laboratory(s) that will be used to conduct the analysis of the test gas fuel samples. [If parties agree to have their separate samples analyzed, the analysis should be performed by different laboratories...](#)

### 4-4.6 Gas Fuel Sensible Heat

...The heat rate [correction factor](#) may be determined from a calculation of sensible heat or application of a manufacturer-supplied correction factor. The calculation of sensible heat is described in para. 5-4.1.11.

### 4-6.3 Measurement of Auxiliary Loads

Besides excitation power (see para. 4-6.2), the auxiliary loads generally consist of the electrical loads of the lubrication and hydraulic systems; water injection skids, external cooling air systems, etc. ~~Another significant auxiliary load is the power required by the gas fuel compressor, necessary sometimes to boost the supply line gas pressure to the pressure required by the combustion system...~~ For loads measured locally by temporary instrumentation, the exact measuring point has to be clearly identified and qualified personnel should connect the meters to avoid accidents. [Refer to ASME PTC 19.6 Section 3-8 for measurement and calculation of auxiliary power.](#)

**5-2.4.1 Voltage Transformers.** The secondary voltage measured by the voltage transformer shall be multiplied by the voltage transformer marked ratio (VTR) and by the voltage transformer ratio correction factor (VTR<sub>corr</sub>) to calculate the primary voltage on the high side of the transformer. For the typical case where VTs are dedicated to voltage measurement and not to relays or voltage regulators, the secondary burden can be assumed to be close to zero. ~~Therefore, the calibration data at zero burden plus 0.0005 may be assumed, leading to an estimated uncertainty of ±0.05%.~~

## 5-5 CORRECTION OF TEST RESULTS — FUNDAMENTAL PERFORMANCE EQUATIONS

...Table 5-5-2 summarizes the correction factors used in all the fundamental performance equations. [Calculations for correction factors shall be carried to at least four decimal places.](#)

## 5-6.1 APPLICATION OF CORRECTION FACTORS USING MODEL-BASED CORRECTIONS

...The correction factors derived from the simulation model are applied to the measured performance. [Intended application of the correction factors \(multiplier/divisor/adder/subtractor\) shall be specified in the site-specific test procedure.](#) Applicable corrections are described in paras. 5-6.2.1 through 5-6.2.13.

## 5-6.2 Application of Correction Factors Using Correction Curves

Since the variation in power, heat rate, exhaust flow or energy, and exhaust temperature due to various external conditions is unique to each gas turbine, a set of site-specific correction curves ~~should~~ [shall](#) be generated for incorporation into the site-specific test procedures prior to the test... For example, the correction for fuel composition may be split into two or more components to better characterize the impact of fuel composition on gas turbine performance. [All correction curves shall be provided in graphical format with corresponding formulae.](#)

### 5-6.2.4 Fuel Composition Correction ( $\alpha_4, \beta_4, \gamma_4, \epsilon_4, \delta_4$ ).

... As another alternative, the fuel composition correction factors may be determined by the thermal performance simulation model after the test, if agreed upon by the parties. The simulation model provider ~~should~~ [shall](#) provide a sample correction calculation in the detailed test procedures prior to the test.

## 6-5 CALCULATIONS AND RESULTS

(d)(3) tabulation or list of all corrections made to as-measured data, [including the value of each correction applied](#)

## 7-1 INTRODUCTION

This Section contains sample calculations for gas turbine tests defined by this Code: unit output and ~~thermal efficiency~~ [heat rate](#) (subsection 7-3), comparative tests (subsection 7-4), and exhaust energy and flow calculations (subsection 7-5). It also summarizes some of the key uncertainty considerations from ASME PTC 19.1 (subsection 7-2).

### 7-2.6 Sensitivity Coefficients, or Influence Coefficients, $\Theta_i$

The sensitivity coefficients are equal to the ~~slope~~ [relative change](#) of the correction ~~curves~~ at the conditions of the test run. Most sensitivities are unique to each gas turbine design, and are provided by the manufacturer. The parties shall agree on the source of these values before conducting any uncertainty analyses. In the pretest analysis, use the ~~slope~~ [relative change](#) at the Specified Reference Condition, or, if known, at the condition expected during the test. In the posttest analysis, use the ~~slope~~ [relative change](#) at the test conditions.

### 7-3.2 Uncertainty Calculations

As specified in para. 7-2.7, the uncertainties in power output and ~~thermal efficiency~~ [heat rate](#) are equal to the RSS value of the uncertainty of each parameter multiplied by its Sensitivity Coefficient. The calculations include the measurements and  $\Theta$  values necessary to adjust the test point results to the Specified Reference Conditions.

### 7-3.3 Sample Calculation

**7-3.3.1 Power.** With the three watt-hour meter method, total gross power is the sum of the three-phase measurements.

$$P_g = P_1(CT_1, VT_1) + P_2(CT_2, VT_2) + P_3(CT_3, VT_3)$$

...

Based on the factory type (design) test information, the current transformer total uncertainties can be estimated as  $\pm 0.15\%$  [when using  \$\pm 0.3\%\$  accuracy class](#) ~~when and~~ operated within their rated burden range during the test and ~~operated~~ near 100% of rated current.

*FOR INFORMATION ONLY: The green highlighted cells in the table below are updated values for consideration.*

| Table 7-3.1-1 Step 1: Code Limit Uncertainty (Example) |                                 |                  |                 |      |                     |                 |              |                                  |                                   |                                    |            |          |          |       |
|--------------------------------------------------------|---------------------------------|------------------|-----------------|------|---------------------|-----------------|--------------|----------------------------------|-----------------------------------|------------------------------------|------------|----------|----------|-------|
| Result                                                 | Parameter                       | Measured By      | Table 4.1.2.1-1 |      | Pretest Uncertainty |                 | Sensitivity  |                                  | Total                             | Pretest                            |            |          |          |       |
|                                                        |                                 |                  | 1 Limit         | Unit | B                   | 2s <sub>p</sub> | Θ [Note (1)] | (U <sub>B</sub> *Θ) <sup>2</sup> | (U <sub>2s</sub> *Θ) <sup>2</sup> | Unc (U <sub>T</sub> ) <sup>2</sup> | Code Limit |          |          |       |
| Power                                                  | Watthours                       | 3-meter method   |                 |      |                     |                 |              | 0                                | 0                                 | 0                                  |            |          |          |       |
|                                                        | Volts (ratio)                   | Calib VTs        |                 |      |                     |                 |              | 0                                | 0                                 | 0                                  |            |          |          |       |
|                                                        | Amps (ratio)                    | 0.3% Class CTs   |                 |      |                     |                 |              | 0                                | 0                                 | 0                                  |            |          |          |       |
|                                                        | Time (if req'd)                 | Digital watch    |                 |      |                     |                 |              | 0                                | 0                                 | 0                                  |            |          |          |       |
|                                                        | Gross Power                     |                  | 0.25            | %    |                     |                 |              | 1                                | 0                                 | 0                                  | 0.0625     | 0.250    |          |       |
|                                                        | Aux Power                       | Station Meter    | 5               | %    |                     |                 |              | 0.015                            | 0                                 | 0                                  | 0.005625   |          |          |       |
|                                                        | Net Power                       |                  |                 |      |                     |                 |              |                                  |                                   |                                    |            | SUM      | 0.068125 | 0.261 |
| Heat Input                                             | Flow Coeff C                    | From calibration |                 |      |                     |                 |              | 1                                | 0                                 | 0                                  | 0          |          |          |       |
|                                                        | Exp factor                      | 4Dp/P            |                 |      |                     |                 |              | 1                                | 0                                 | 0                                  | 0          |          |          |       |
|                                                        | Compress Z                      | AGA 8            |                 |      |                     |                 |              | -0.5                             | 0                                 | 0                                  | 0          |          |          |       |
|                                                        | DP                              | Diff Press Xmtr  |                 |      |                     |                 |              | 0.5                              | 0                                 | 0                                  | 0          |          |          |       |
|                                                        | Fuel Press P                    | Press Xmtr       |                 |      |                     |                 |              | 0.5                              | 0                                 | 0                                  | 0          |          |          |       |
|                                                        | Fuel Temp T                     | RTD              |                 |      |                     |                 |              | -0.5                             | 0                                 | 0                                  | 0          |          |          |       |
|                                                        | DP factors                      |                  |                 |      |                     |                 |              | 1                                | 0                                 | 0                                  | 0          |          |          |       |
|                                                        | Mol % of fuel [Note (2)]        | ASTM 1945        |                 |      |                     |                 |              | 1                                | 0                                 | 0                                  | 0          |          |          |       |
|                                                        | Heat Input                      |                  | 0.75            | %    |                     |                 |              |                                  |                                   |                                    |            | 0.5625   | 0.750    |       |
| Heat Rate                                              | RSS of Net power and heat input |                  |                 |      |                     |                 |              |                                  |                                   |                                    | 0.630625   | 0.794    |          |       |
| Corrected Power                                        | Inlet Temp                      | Multiple RTDs    | 1               | °F   |                     |                 |              | 0.3                              | 0                                 | 0                                  | 0.09       |          |          |       |
|                                                        | Bar Press                       | Abs Press Xmtr   | 0.075           | %    |                     |                 |              | 1                                | 0                                 | 0                                  | 0.005625   |          |          |       |
|                                                        | Rel Humidity                    | Hygrometer       | 2               | %    |                     |                 |              | 0.004                            | 0                                 | 0                                  | 0.000064   |          |          |       |
|                                                        | Power Factor                    | Volts,amps,kW    |                 |      |                     |                 |              | 0.015                            | 0                                 | 0                                  | 0          |          |          |       |
|                                                        | Water Inj Flow                  | Orifice          | 2               | %    |                     |                 |              | 0.035                            | 0                                 | 0                                  | 0.0049     |          |          |       |
|                                                        | Air Extr Flow                   | Orifice          | 2               | %    |                     |                 |              | -0.021                           | 0                                 | 0                                  | 0.001764   |          |          |       |
|                                                        | Net Power                       |                  |                 |      |                     |                 |              |                                  |                                   |                                    | 0.068125   |          |          |       |
|                                                        | Corrected Power                 |                  |                 |      |                     |                 |              |                                  |                                   |                                    |            | SUM      | 0.170478 | 0.413 |
| Corrected Heat Rate                                    | Inlet Temp                      |                  | 1               | °F   |                     |                 |              | 0.08                             | 0                                 | 0                                  | 0.0064     |          |          |       |
|                                                        | Rel Humidity                    |                  | 2               | %    |                     |                 |              | 0.0076                           | 0                                 | 0                                  | 0.000231   |          |          |       |
|                                                        | Water Inj Flow                  |                  | 2               | %    |                     |                 |              | 0.013                            | 0                                 | 0                                  | 0.000676   |          |          |       |
|                                                        | Water Inj Temp                  | TC               | 5               | °F   |                     |                 |              | 0.004                            | 0                                 | 0                                  | 0.0004     |          |          |       |
|                                                        | Air Extr Flow                   |                  | 2               | %    |                     |                 |              | 0.011                            | 0                                 | 0                                  | 0.000484   |          |          |       |
|                                                        | Heat Rate                       |                  |                 |      |                     |                 |              | 1                                | 0                                 | 0                                  | 0.630625   |          |          |       |
| Corrected Heat Rate                                    |                                 |                  |                 |      |                     |                 |              |                                  |                                   |                                    | SUM        | 0.638816 | 0.799    |       |

NOTES:  
(1) These sensitivities assumed for this example. Every test will have its own set depending on the characteristics of the tested turbine's equipment.  
(2) See Table 7-3.3.2.2-1 for actual calculation of the uncertainty for Mol%.

### 7-3.3.4 Inlet Air Temperature.

...Here  $s_{s_{IT}}$  is the sample standard deviation of each of the 30 readings taken during the test, obtained from the DAS. The random standard uncertainty of the inlet air temperature is:

$$RSU = s_{Tbar} = \left[ \sum_{i=1}^{10} (\Theta s_{iTbar})^2 \right]^{0.5} / \sqrt{N}$$

$\Theta$  = sensitivity = 1/10

$s_{s_{ITbar}}$  = standard deviation of the mean of each sensor

— =  $s_{IT} / \sqrt{N}$ , and  $N$  = number of readings = 30

...

Then  $b_T = 0.256^\circ\text{F}$  and  $u_T = (b_T^2 + s_{Tbar}^2)^{0.5} = 0.2566^\circ\text{F}$ . For the 95% confidence level,  $U_T$  would usually be close to  $2u_T$  if the degrees of freedom  $\nu_T$  were 20 or higher...

## I-3 CALCULATIONS AND RESULTS: GENERAL

I-3.2.1.1 General. The following inlet dry air molar composition is assumed:

| Element/Compound | Composition, % |
|------------------|----------------|
| Nitrogen         | 78.084         |
| Oxygen           | 20.9476        |
| Argon            | 0.9365         |
| Carbon dioxide   | 0.03129        |
|                  | 100            |

## BSR/UL 1008A, Standard for Safety for Transfer Switch Equipment, Over 1000 Volts

## 1. Revisions to Table 16 to align with UL 347 up to 15 kV

## PROPOSAL

Table 16  
Rated insulation levels and test voltages

| Rated maximum voltage<br>$U_r$ kV                                                             | Rated power-frequency withstand voltage<br>$U_s$ kV | Rated lightning impulse withstand voltage<br>$U_p$ kV (peak) | Power-frequency test voltage<br>$V_{max}$ |                               |                            | Impulse withstand test voltage<br>kV (peak) |                                                                   |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------|-------------------------------------------|-------------------------------|----------------------------|---------------------------------------------|-------------------------------------------------------------------|
|                                                                                               |                                                     |                                                              | Common value                              | Across the isolating distance | Test voltage repeated      | Test voltage common value                   | Test voltage across the isolating distance of the isolating means |
| Column 1                                                                                      | Column 2                                            | Column 3                                                     | Column 4                                  | Column 5                      | Column 6                   | Column 7                                    | Column 8                                                          |
| For transfer switches based on contactors in medium voltage controllers and other equipment   |                                                     |                                                              |                                           |                               |                            |                                             |                                                                   |
| 751 – 1500                                                                                    | 2000 + (2-1/4 × rated voltage)                      | 20                                                           | 2000 + (2-1/4 × rated voltage)            | 110 percent of common value   | 2 × rated voltage          | 20                                          | 22                                                                |
| 1501 – 3600                                                                                   | 2000 + (2-1/4 × rated voltage)                      | 45                                                           | 2000 + (2-1/4 × rated voltage)            | 110 percent of common value   | 2 × rated voltage          | 45                                          | 50                                                                |
| 3601 – 7200                                                                                   | 2000 + (2-1/4 × rated voltage)                      | 60                                                           | 2000 + (2-1/4 × rated voltage)            | 110 percent of common value   | 2 × rated voltage          | 60                                          | 66                                                                |
| 7201-12000                                                                                    | 2000 + (2-1/4 × rated voltage)                      | 75                                                           | 2000 + (2-1/4 × rated voltage)            | 110 percent of common value   | 2 × rated voltage          | 75                                          | 85                                                                |
| 12001-15000                                                                                   | 2000 + (2-1/4 × rated voltage)                      | 95                                                           | 2000 + (2-1/4 × rated voltage)            | 110 percent of common value   | 2 × rated voltage          | 95                                          | 110                                                               |
| For transfer switches based on metal-clad switchgear or metal-enclosed interrupter switchgear |                                                     |                                                              |                                           |                               |                            |                                             |                                                                   |
| up to 4760                                                                                    | 19000                                               | 60                                                           | 19000                                     | 110 percent of common value   | 80 percent of common value | 60                                          | 66                                                                |
| 4761 – 15000                                                                                  | 36000                                               | 95                                                           | 36000                                     | 110 percent of common value   | 80 percent of common value | 95                                          | 105                                                               |
| For all other types of transfer switches                                                      |                                                     |                                                              |                                           |                               |                            |                                             |                                                                   |
| 7201 – 15000                                                                                  | 36000                                               | 95                                                           | 36000                                     | 110 percent of common value   | 80 percent of common value | 95                                          | 105                                                               |
| 15001 – 27000                                                                                 | 60000                                               | 125                                                          | 60000                                     | 110 percent of common value   | 80 percent of common value | 125                                         | 138                                                               |

## 2. Updates to service equipment requirements to align with 2020 NFPA 70

## PROPOSAL

## 23.1 Service disconnecting means

23.1.1 The following requirements shall apply:

a) Equipment marked for service equipment use shall be provided with disconnecting means for all ungrounded service conductors. This may be provided by up to six separate service disconnecting means switches. Each service disconnecting means switch shall disconnect all ungrounded service conductors of the circuit which it controls. Each service disconnecting means shall be in a separate compartment or separate section, with barriers between adjacent compartments and sections.

b) In determining the allowable number of disconnects, a device used solely for disconnecting power-monitoring equipment or the control circuit of a power-operable service disconnecting means, including a ground fault protection system, shall not be considered a service disconnecting means.

c) In a group of sections having a main service disconnect, only the main section or compartment shall be marked for service equipment use.

d) The service disconnecting means shall be a manually operated means or a power-operated means that can be opened by hand in the event of a power supply failure.

e) The contacts of the service disconnect shall provide visible evidence of an isolating gap. Where the contacts of the service disconnect are not visible (such as when an oil, vacuum, or gas-filled interrupter serves as the disconnecting means), one of the following additional visible isolating means shall be provided:

1) An isolating switch with visible break contacts shall be provided on the supply side of the service disconnect; or

2) The service disconnect shall be mounted on a removable truck that cannot be moved unless the service disconnect is open, and all energized parts are automatically disconnected when the truck is moved from the normal operating position.

f) The service disconnect shall be provided with a means for readily connecting the load side conductors to ground when disconnected from the source of supply.

g) The service disconnecting means shall have a fault closing rating not less than the short-circuit withstand rating of the equipment. Where fused switches or separately mounted fuses are installed, the fuse characteristics may contribute to the fault-closing rating of the disconnecting means.

h) Service disconnects for fire pump equipment shall not be located in multi-section equipment with other service disconnects.

i) Only the following equipment may be connected to the supply side of the service disconnect means:

1) Instrument transformers (current and voltage);

2) Surge arresters;

3) Control circuits for power-operable service disconnecting means, if suitable overcurrent protection and disconnecting means are provided; and

4) Ground fault protection systems, if suitable overcurrent protection and disconnecting means are provided.

**[Note from the STP Project Manager: Clause 23.1A is meant to go in between Clause 23.1 and Clause 23.2.]**

### **23.1A Guarding against inadvertent contact**

23.1A.1 Service equipment shall be constructed such that, with the service disconnect in the off position, no ungrounded uninsulated live part, including bus and terminals on the line side of the service disconnect, is exposed to inadvertent contact by persons while servicing any field connected load terminal, including a neutral load terminal, a branch circuit equipment grounding terminal, or the neutral disconnect link.

Note: In accordance with the Standard for Electrical Safety in the Workplace, NFPA 70E, an electrically safe work condition should be established prior to working on electrical equipment. Accessibility requirements do not endorse working on energized electrical equipment.

23.1A.2 Exposure to inadvertent contact is determined by use of the probe illustrated in Figure 4. If restriction to the line-side of the service disconnect is dependent on the installation of field installed service conductors, conductors sized in accordance with Table 3 shall be installed in the terminals when determining exposure to inadvertent contact. All live parts of the line side service terminal, including the connector body and pressure screw shall be evaluated.

32.1 The performance of transfer switches other than those covered in 29 – 31 shall be investigated by subjecting a representative device or devices in commercial form to the tests described in 33 – 53 and 55. Unless otherwise indicated, the various tests shall be conducted at rated supply frequency and voltage.

Figure 4  
Straight Probe

