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Aerospace Industries Association

Global is the worldwide distributor of AIA standards and publications. AIA represents U.S. companies engaged in research, development, and manufacturing of aerospace systems such as aircraft, missiles, spacecraft, and space launch vehicles; propulsion, guidance, and control systems for flight vehicles; and a variety of airborne and ground-based equipment essential to the operation of flight vehicles. AIA maintains a close working alliance with the Department of Defense, National Aeronautics and Space Administration, and other agencies and industry organizations. The association's primary standards developing body is the National Aerospace Standards Committee (NAS). Global offers fast and complete access to the AIA standards and publications. Please call if you would like to receive an index.

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Index to National Aerospace Standards
Organized into Inch and Metric sections, each section contains numeric listings by document number and alphabetic listings by title. Document listings include number, title, revision level, date, and reaffirmation date if applicable.
NAS INDEX

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Code of Federal Regulations (CFR)

Aeronautics and Space
Please see page 154 for a complete description.
14 CFR 1-59
14 CFR 60-139
14 CFR 140-199
14 CFR 200-1199
14 CFR 1200-END

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The DATCOM is a systematic summary of methods for estimating basic stability and control derivatives. The DATCOM is organized so that for any given flight condition and configuration the complete set of derivatives can be determined without resorting to outside information. The DATCOM is to be used for preliminary design purposes before the acquisition of test data.

USAF Stability and Control DATCOM
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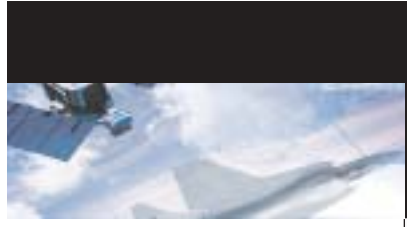

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Drawing Requirements Manual (DRM)
Please see page 44 for a complete description.
DRM
DRM CD
DRM (LL)
DRM COMBO
DRM COMBO (LL)

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GOVERNMENT/MILITARY TRENDS NEWSLETTER

Joint Aviation Authorities

The JAA is an associated body of the European Civil Aviation Conference (ECAC) representing the civil aviation regulatory authorities of a number of European States who have agreed to cooperate in developing and implementing common safety regulatory standards and procedures. The JAA is responsible for the development and application of common provisions (so called Joint Aviation Requirements - JARs) as well as of procedures concerning the safety and operation of aircraft's. The JAA develops and adopts JARs in the field of aircraft design and manufacture, aircraft operations and maintenance, and the licensing of aviation personnel. Global provides all of the JAA documents.

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The Administrative & Guidance Material (A&GM) is material published to provide further information regarding the various JAA activities and JARs. This includes Joint Implementation Procedures as well as Temporary Guidance Material and Interim Policies.

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General

JAA Directory
Address and telephone numbers of persons involved in JAA activities. In addition, an overview of JAA's committees and groups is included.
JAA DIRECTORY

Administrative & Guidance Material Section 1: General Guidance and Reference Material
A general guide to the JAA and its activities. It includes a listing of the current amendment status of the JARs and of the NPAs issued to date.
JAA A&GM SECTION 1

Maintenance

Administrative & Guidance Material Section 2: Maintenance Guidance Material and Procedures
General information on maintenance activities in the JAA, as well the JAA's implementation procedures for JAR-145, JAR-66, and JAR-147 and existing temporary guidance material.
JAA A&GM SECTION 2

JAR-145 Approved/Accepted Organizations
Organizations approved under JAR-145.
JAA JAR-145 LIST

JAR 145 Approved/Accepted Organizations
Renewal of subscription service.

Administrative and Guidance Material
Organizations approved under JAR-147.
JAA JAR-147 LIST

Certification

Administrative & Guidance Material Section 3: Certification Guidance Material and Procedures
General information on certification activities in the JAA, as well the JAA's implementation procedures for Certification/Validation as well as existing temporary guidance material.
JAA A&GM SECTION 3

Operations

Administrative & Guidance Material Section 4: Operations Guidance Material and Procedures

General information on operations activities in the JAA, as well the JAA's implementation procedures for JAR-OPS, and existing temporary guidance material. Also a list of AOC holders is included.
JAA A&GM SECTION 4

Administrative & Guidance Material Section 6: Synthetic Training Devices Guidance Material and Procedures

General information on synthetic training devices activities of JAA, as well as the JAA's implementation procedures for JAR-STD, and existing temporary guidance material. A list of STD holders is included.
JAA A&GM SECTION 6

Licensing

Administrative & Guidance Material Section 5: Licensing Guidance Material and Procedures

General information on licensing activities in the JAA, as well as the JAA's implementation procedures for JAR-FCL.
JAA A&GM SECTION 5

Learning Objectives for Theoretical Knowledge (ATPL)

Represent an indication of the depth and scope of knowledge required by the JAA Airline Transport Pilot's License (Aeroplanes)(ATPL(A)).
JAA LEARNING OBJ ATPL

Joint Aviation Authorities (JAA)

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Joint Aviation Requirements (JARs)

JARs contain requirements and advisory material Advisory Circulars Joint (ACJ); Advisory Material Joint (AMJ); Acceptable Means of Compliance (AMC); and Interpretative and Explanatory Material (IEM). Pricing for the JARs include amendments issued during the calendar year of purchase. After the initial subscription year, it is recommended that customers purchase a subscription renewal in order to continue receiving JAR amendments. JARs are also available electronically.

JAA Full Set of JARs

Includes complete set of JAA JARs (exludes NPA Service).
JAA JAR COMPLETE SET

General

Definitions and Abbreviations

Definitions and abbreviations used in the JAA system.
JAA JAR-1

JAA Regulatory and Related Procedures

Procedures and process for the development of JARs and amendments to JARs.
JAA JAR-11

Joint Advisory Material - Advisory Circular Joint

GAI-20 covers ACJs relating to more than one JAR, across various disciplines, which may, if desired be published only once; thus avoiding the need for the duplication of that text. The document includes Advisory Material for issues such as GPS, B-RNAV, recognition of EUROCAE ED-12B.
JAA GAI-20

Maintenance

Approved Maintenance Organizations

Requirements for the granting of a maintenance organization approval.
JAA JAR-145

Certifying Staff

Requirements for maintenance certifying staff to qualify under the authority of a JAR-145 organization to issue JAR 145.50 certificates of release to service.
JAA JAR-66

Maintenance Training Organizations

Requirements for the training/examination of maintenance certifying staff to the standard of JAR-66 to qualify under the authority of a JAR-145 organization to issue JAR 145.50 certificates of release to service.
JAA JAR-147

Certification

Certification Procedures for Aircraft and Related Products & Parts

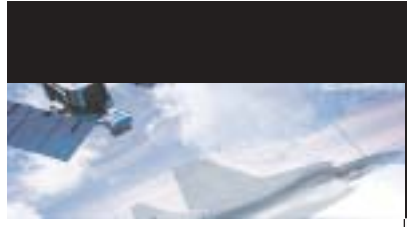
Requirements for the type certification of aircraft, engines, APUs, and other parts.
JAA JAR-21

Sailplanes and Powered Sailplanes

Certification standards for sailplanes and powered sailplanes in the utility (U) and aerobatic (A) categories.
JAA JAR-22

Normal, Utility, Aerobatic and Commuter Category Aeroplanes

Airworthiness standards for the certification of aeroplanes in the normal, utility and aerobatic categories that have a seating configuration, excluding pilot seats, of nine or less and a maximum certificated take-off weight of 12,500 lbs or less; and propeller-driven twin-engined aeroplanes in the commuter category that have a seating configuration, excluding pilot seats, of nineteen or less and a maximum certificated take-off weight of 19,000 lbs or less.
JAA JAR-23



Large Aeroplanes
Airworthiness standards for the certification of multi engine turbine-powered aeroplanes with a maximum take-off weight greater than 5,700 kg.
JAA JAR-25

Small Rotorcraft
Airworthiness standards for the certification of rotorcraft with maximum weights of 6,000 lbs or less.
JAA JAR-27

Large Rotorcraft
Airworthiness standards for the certification of rotorcraft with maximum weights greater than 6,000 lbs.
JAA JAR-29

Aircraft Noise
Requirements for complying with aircraft noise certification. Based on ICAO Annex 16.
JAA JAR-36

Engines
Airworthiness standards for the certification of engines.
JAA JAR-E

Propellers
Airworthiness standards for the certification of propellers.
JAA JAR-P

Auxiliary Power Units
Airworthiness standards for the certification of auxiliary power units.
JAA JAR-APU

Joint Technical Standard Orders
Approved Joint Technical Standard Orders.
JAA JAR-TSO

All Weather Operations
Airworthiness standards for the certification of aircraft which are capable of automatic landing.
JAA JAR-AWO

Very Light Aeroplane
Airworthiness standards for the certification of aeroplanes with a single engine (spark or compression-ignition) having not more than two seats, with a Maximum Certificated Take-off Weight of not more than 750 kg and a stalling speed in the landing configuration of not more than 45 knots (CAS), that is to be operated in day-VFR only. This code excludes those aircraft classified as ultralights or microlights.
JAA JAR-VLA

Operations

Commercial Air Transportation (Aeroplanes)
Requirements which apply to the operation of aeroplanes for the purpose of commercial air transportation.
JAA JAR-OPS 1

Commercial Air Transportation (Helicopters)
Requirements which apply to the operation of helicopters for the purpose of commercial air transportation.
JAA JAR-OPS 3

Additional Airworthiness Requirements for Operations
Additional airworthiness requirements for commercial air transportation with aeroplanes which are to be put in place in time for the final implementation of JAR-OPS Part 1.
JAA JAR-26

Aeroplane Flight Simulators
Requirements which apply to those persons, organizations or enterprises (Simulator Operators) seeking qualification of Flight Simulators.
JAA JAR-STD 1A

Aeroplane Flight Training Devices
Requirements which apply to those persons, organizations or enterprises (FTD Operators) seeking qualification of Flight Training Devices.
JAA JAR-STD 2A

Flight & Navigation Procedures Trainers
Requirements which apply to those persons, organizations or enterprises (FNPT Operators) seeking qualification of FNPTs.
JAA JAR-STD 3A

Basic Instrument Training Devices
Requirements which apply to those manufacturers and/or operators of Basic Instrument Training Devices seeking qualification of these.
JAA JAR-STD 4A

Helicopter Flight Simulators
Requirements which apply to those persons or organizations (STD Operators) seeking qualification of Flight Simulators.
JAA JAR-STD 1H

Helicopter Flight and Navigation Procedures Trainers
Requirements which apply to persons/organizations (STD Operators) seeking qualification of Flight and Navigation Procedures Trainers.
JAA JAR-STD 3H

Master Minimum Equipment List/Minimum Equipment List
Requirements prescribing the conditions for the approval of documents called “Master Minimum Equipment Lists” (MMEL) and “Minimum Equipment Lists” (MEL).
JAA JAR-MMEL/MEL

Licensing

Flight Crew Licensing (Aeroplanes)
Requirements for obtaining and maintaining a pilot’s license, and ratings, for aeroplanes, as well as requirements for Training Organizations, approved courses and examiner authorizations.
JAA JAR-FCL 1

Flight Crew Licensing (Helicopters)
Requirements for obtaining and maintaining a pilot's license, and ratings, for aeroplanes, as well as requirements for Training Organizations, approved courses and examiner authorizations.
JAA JAR-FCL 2

Flight Crew Licensing (Medical)
Requirements for obtaining and maintaining a medical certificate in conjunction with a pilot/flight engineer's license. This JAR also includes the JAA Manual of Civil Aviation Medicine.
JAA JAR-FCL 3

Flight Crew Licensing (Flight Engineers)
Requirements for obtaining and maintaining a flight engineer's license, and ratings, as well as requirements for Training Organizations, approved courses and examiner authorizations.
JAA JAR-FCL 4

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Metallic Materials and Elements for Aerospace Vehicle Structures
This Handbook is primarily intended to provide a source of design mechanical and physical properties, and joint allowables. Material property and joint data obtained from tests by material and fastener producers, government agencies, and members of the airframe industry are submitted to MIL-HDBK-5 for review and analysis. Results of these analyses are submitted to the membership during semi-annual coordination meetings for approval and, when approved, published in this Handbook.
MIL-HDBK-5
MIL-HDBK-5 CD

Protective Finishing for Army Missile Weapon Systems
This standard establishes the minimum requirements for procedures, materials, and systems for cleaning, plating, painting and finishing metals, wood, electronic materials, parts and assemblies for rockets, guided missiles, and components to protect them from deterioration.
MIL-STD-186

Aircraft, Electric Power, Characteristics
MIL-STD-704

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MS SET

MS Drawings Index - Index to AN, AND and MS Drawings Standards
Please see page 84 for a complete description.
MS INDEX

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The QPL and SOS are valuable resources for identifying hardware and providing quick and easy access to the information required. QPL and SOS will do the research needed and in the process save hours of valuable time.

Qualified Products Lists and Sources (QPL)
Please see page 158 for a complete description.
QPL

Qualified Products Lists (QPL) Complete Set
The QPL Complete Set is a comprehensive resource, which identifies parts that have been qualified by test. This collection consists of both federal and military QPLs. The QPL Complete Set is an 11 volume set and includes the QPL Index and update service for the first year.
QPL COMPLETE SET

Qualified Products Lists Index
The QPL Index contains both federal and military QPLs and consists of two sections: a numerical listings by document number and alphabetical listing by document title. Each entry includes its number, title, current revision level, current revision date, and reaffirmation date.
QPL INDEX

Source of Supply (SOS)
Please see page 85 for a complete description.
SOS

SAE International (SAE)

Certification Considerations for Highly-Integrated or Complex Aircraft Systems
SAE ARP 4754

Guidelines and Methods for Conducting the Safety Assessment Process on Civil Airborne Systems and Equipment
SAE ARP 4761

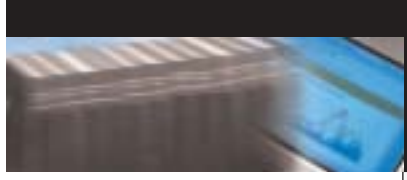
Identification Marking Methods
SAE AS 478

Aerospace Size Standard for O-Rings
SAE AS 568

Quality Systems - Aerospace - Model for Quality Assurance in Design, Development, Production, Installation and Servicing
SAE AS 9100

Aerospace First Article Inspection Requirement
SAE AS 9102

Variation Management of Key Characteristics
SAE AS 9103



2004 ASTM Annual Book of Standards

What's New for 2004!

All standards previously appearing in 2003 Volume 10.05 will now appear in Volume 10.04. There is no longer a Volume 10.05. All standards appearing in Volume 13.01 will be divided into two volumes as follows: Volume 13.01 will include standards on medical and surgical materials and devices; and anesthetic and respiratory equipment.

NEW! Volume 13.02 will include standards on emergency medical services; search and rescue.

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Section 00 - Index

Index - Subject Index; Alpha-Numeric Index
An essential tool to help you find the standards you need. It contains both subject and alphanumeric indexes to over 12,000 standards in the 2004 Annual Book of ASTM Standards, including many new and revised standards.
ASTM 00.01
Available: November 2004

Section 01: Iron and Steel Products

Steel – Piping, Tubing, Fittings
This edition features standards for various types of steel pipe, which specify requirements for high-temperature service, ordinary use, and special applications such as fire protection. Specifications for steel tubes list standard requirements for boiler and superheater tubes, general service tubes, still tubes in refinery service, heat exchanger and condenser tubes, mechanical tubing, and structural tubing. Steel casting specifications call out the standard properties for valves, flanges, fittings, and other pressure containing parts for high-temperature and low-temperature service. It also includes specifications on black, plain end steel pipe for use in the conveyance of fluids under pressure.
ASTM 01.01
Available: January 2004

Ferrous Castings; Ferroalloys
Volume 01.02 includes standards that set forth the property requirements of steel castings used for general applications, structural purposes, and high-temperature and low-temperature service. It also features alloy-casting specifications that list the necessary qualities for castings made of nickel and chromium alloys. Others detail property and testing requirements for gray and white iron castings, cast iron pipe and fittings, ductile iron castings, malleable iron castings, and various ferroalloys. Standards on radiographic examination of castings to be used with ASTM's standard reference radiographs appear as well.
ASTM 01.02
Available: January 2004

Steel – Plate, Sheet, Strip, Wire; Stainless Steel Bar
Under the heading of steel plate, sheet, and strip, this volume covers specifications that stress various mechanical property requirements and applications. The majority of these specifications have been adopted by the Department of Defense. Also featured are specifications that detail the properties of assorted types of steel wire and industrial sizing screens.
ASTM 01.03
Available: February 2004

Steel – Structural, Reinforcing, Pressure Vessel, Railway
This volume features specifications that fix the requirements for various types of structural steel, such as high-strength, low-alloy, rolled steel floor plates, and carbon-silicon steel plates. Some standards focus on plates and forgings used in boilers and pressure vessels, detailing the property requirements that the materials must satisfy; while others deal with steel for concrete reinforcement and prestressed concrete. Specifications that set the properties for railway service rails and accessories are also included.
ASTM 01.04
Available: January 2004

Steel – Bars, Forgings, Bearing, Chain, Springs
Specifications and test methods detail the properties of various steel bars intended for specific or general applications. Others focus on carbon steel axles, alloy steel axles, wrought carbon steel wheels, steel tires, and carbon and alloy steel forgings for railway use. Volume 01.05 also examines standards that set the requirements for and measure the properties of steel forgings and billets in assorted applications, such as pressure vessels, rotors, and general use. The remaining specifications cover steel chain, bearing steels, and tool steels.
ASTM 01.05
Available: January 2004

Coated Steel Products
Volume 01.06 examines the property requirements of aluminum or zinc-coated steel, fixes the required qualities for tin mill products, and sets the properties of coated steel wire, primarily aluminum and zinc-coated wire. Other standards focus on corrugated steel pipe, providing property requirements and installation procedures. Guides for residential and sports facility fences, as well as fencing standards covering fabric, posts, gates, and fitting are also featured.
ASTM 01.06
Available: February 2004

Ships and Marine Technology
Appearing in this volume are specifications, practices, and guides used in the marine industry. They include standard requirements for: steel furniture, watertight doors, marine coatings inspections and applications, electrical insulation monitors, computer applications, electronic databases, piping systems, transducers, and valves.
ASTM 01.07
Available: January 2004

Fasteners; Rolling Element Bearings
Volume 01.08 contains specifications that establish the property requirements for various internally and externally threaded fasteners, and non-threaded and driven fasteners, such as rivets, spikes, and washers. Also included are several quality assurance standards. Standards on rolling element bearings establish the basic quality, physical and mechanical properties, and test requirements for bearings to be used in automotive and aerospace applications.
ASTM 01.08
Available: January 2004

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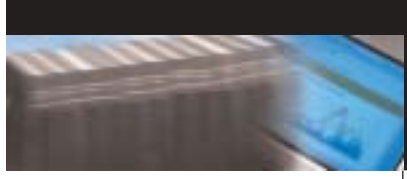


Section 02: Nonferrous Metal Products

Copper and Copper Alloys

Appearing in this volume are specifications for copper and copper alloy plate, sheet, strip, roller bar, rod bar, and shapes. Some detail the property requirements for seamless and welded tubes for ordinary use, water service, condensers, and special uses; and for various types of wire, including hard-drawn copper, copper-silicon alloy, and phosphor bronze. Others furnish the requirements for bronze and copper alloy castings for special and general applications; and several measure certain properties of copper and copper alloys, such as bending fatigue, deviations from flatness, and offset yield strength.

ASTM 02.01

Available: May 2004

Aluminum and Magnesium Alloys

The specifications in this volume define the necessary qualities of aluminum, aluminum alloys, and aluminum-covered steel, e.g., bars, rods, wire, shapes, castings, forgings, fasteners, pipes, tubes, sheet, plates, foil, and cable. Other standards fix the property requirements for magnesium-ingot and magnesium-alloy castings, sheet, forgings, anodes, bars, rods, and shapes: and tests that measure indentation hardness, shear testing, tension testing, and ultrasonic inspection. Reprints of ANSI standards on aluminum are also included.

ASTM 02.02

Available: September 2004

Electrical Conductors

Volume 02.03 focuses on electrical conductors, primarily aluminum-alloy, and aluminum-covered steel; copper, copper-alloy, and copper-covered steel; and steel wire. Under the heading of aluminum, various specifications define the required properties for stranded conductors and wire, and many list the requirements for copper or copper-alloy wire and stranded conductors. Other specifications detail the properties of aluminum-clad, copper-clad and core steel wire, as well as guys, messengers, and span wires. Also included are standards on superconductors.

ASTM 02.03

Available: May 2004

Nonferrous Metals – Nickel, Cobalt, Lead, Tin, Zinc, Cadmium, Precious, Reactive, Refactory Metals and Alloys: Materials for Thermostats, Electrical Heating and Resistance Contacts, and Connectors

Over half of the standards featured are specifications for nickel and nickel alloys which cover coatings, forgings, pipe, tube; plate, sheet, and strip; rod bar, and wire. Included are specifications for: zinc and zinc alloys; cadmium, copper; gold; hafnium; iridium; lead; lithium; palladium, platinum, rhodium; ruthenium, silver, tin; molybdenum; niobium; tantalum; titanium; tungsten; and zirconium. Procedures for measuring such properties as cross curvature and flexivity of thermostat materials and resistance of electrical contacts to atmospheric corrosion also appear in this volume.

ASTM 02.04

Available: June 2004

Metallic and Inorganic Coatings; Metal Powders, Sintered P/M Structural Parts

Under the headings of metallic and inorganic coatings, specifications establish requirements for various coatings such as electrodeposited coatings of cadmium, tin, and mechanically deposited zinc. It describes tests for measuring the properties of anodically coated aluminum; determining coating thickness and corrosion; and electroforming, electroplating, and surface preparation. Others deal with metal powders and metal powder products that measure properties of cemented carbides and how to measure apparent density and flow rate of metal powders. Specifications that set down the property requirements and related measurement techniques for metal powder structural parts and sintered bearings appear as well as tests that detail how to assess the qualities of porcelain enamel, such as abrasion resistance, adhesion, and thermal shock resistance.

ASTM 02.05

Available: May 2004

Save 25% when you buy all of Section 2 (Volumes 02.01 - 02.05)

Section 03: Metals Test Methods and Analytical Procedures

Metals – Mechanical Testing; Elevated and Low-Temperature Tests; Metallography

Volume 03.01 includes tests and practices that outline the standard procedures needed to perform mechanical testing, including: machine calibration, bend and flexure testing, compression, ductility and formability, elastic properties, impact, linear thermal expansion, shear and torsion, residual stress, and tension testing. Some standards define terms and explain procedures related to fatigue testing and loading, such as cycle counting and statistical analysis; while others list the steps required to perform fracture testing. Also featured are metallography tests and practices that define standard optical, electron, and x-ray procedures for determining the constituents and structure of metals and alloys.

ASTM 03.01

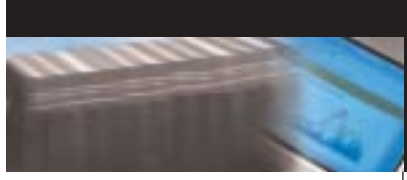
Available: July 2004

Wear and Erosion; Metal Corrosion

Tests, practices, and guides detail standard procedures, both field and laboratory, which measure atmospheric, stress corrosion cracking, corrosion fatigue, corrosion in natural waters and soil, and in-plant corrosion. This volume also includes tests and practices on how to assess wear and erosion of materials and structures.

ASTM 03.02

Available: August 2004



Nondestructive Testing

This volume covers the latest standards on nondestructive testing of engineering materials, structures, and assemblies to detect flaws and characterize materials properties. Subjects include:

Radiology – reference radiograph standards, which when accompanied by ASTM's standard radiograph plates, are used to illustrate the type and degree of discontinuities that may be found in castings and welds. Others detail the procedures required for proper radiographic examination.

Magnetic Particle and Liquid Penetrant Examination – test methods, practices, and reference photographs examine minimum requirements and various techniques.

Acoustic Emission – standard procedures for operating acoustic emission sensors and monitoring structures.

Electromagnetic – standards detail procedures to follow when performing electromagnetic (eddy current) examination of ferrous and nonferrous metals, and in particular, various tubular products

Leak Testing – practices and tests establish procedures for leak testing of open and sealed units.

Other headings in this volume include infrared methods, nondestructive testing agencies, and metals sorting and identification.

ASTM 03.03
Available: October 2004

Magnetic Properties

Under the heading of magnetic properties and materials, this volume contains standards that set down the property requirements and measurement techniques for magnetic materials, primarily electrical steel. It also includes test for determining alternating current and direct current properties.

ASTM 03.04
Available: April 2004

Analytical Chemistry for Metals, Ores, and Related Materials (I): E 32 to E 1724

ASTM 03.05
Available: October 2004

Analytical Chemistry for Metals, Ores and Related Materials (II): E 1763 to latest - Molecular Spectroscopy; Surface Analysis

Volumes 03.05 and 03.06 detail procedures for obtaining and reporting chemical analyses of ferrous and nonferrous metals, metal-bearing ores, and refractories. Some standards specify analytical equipment, and practices for conducting proficiency tests and reporting statistical test results; while others cover computerized systems, chemical, and material information. Volume 03.06 also examines standards procedures for surface analysis and examines practices on gas chromatography procedures, primarily the use of detectors.

ASTM 03.06
Available: October 2004

Save 25% when you buyr all of Section 3 (Volumes 03.01 - 03.06)

Section 04: Construction

Cement; Lime; Gypsum

Volume 04.01 features specifications, tests, and practices that establish the property requirements and measurement procedures for hydraulic cements, including Portland, natural, pozzolanic, masonry, slag, and gypsum board. Some define the appropriate qualities of lime and limestone and how to analyze them, while others present detailed requirements for gypsum, application procedures, and related accessories. A valuable companion to these standards, ASTM's Manual of Cement Testing, also appears in this volume.

ASTM 04.01
Available: September 2004

Concrete and Aggregates

This volume focuses on concrete, aggregates, curing materials, grout, and expansion joint fillers. It also includes the ASTM Manual of Aggregate and Concrete Testing.

ASTM 04.02
Available: October 2004

Road and Paving Materials; Vehicle-Pavement Systems

Specifications, tests, and practices, detail the properties of various road and paving materials and explain how to measure their characteristics. These standards cover aggregates, bituminous mixtures, bridges, bridge decks, and structures. They also cover highway traffic materials, such as retroreflective sheeting and pavement markers. This volume also includes specifications, tests, and practices on vehicle-pavement systems, which cover field methods for measurement of tire pavement friction, measurement and control of roughness in construction and rehabilitation of pavements, surface characteristics related to tire pavement slip resistance, tire and slider characteristics, traffic monitoring, and vehicle roadside communication.

ASTM 04.03
Available: June 2004

Roofing, and Waterproofing

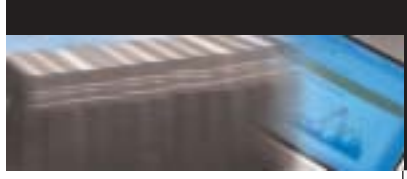
These standards establish property requirements for roofing and waterproofing materials such as: asphalt roof coatings, single-ply membranes, underlayments, roll, and sheeting. Others detail EPDM roofing seams and analysis of roofing membrane materials. Accompanying the specifications are tests and practices, which fix standard procedures for measuring the properties of roofing and waterproofing materials. Also included are several specifications and tests for bituminized fiber pipe.

ASTM 04.04
Available: June 2004

Chemical-Resistant Nonmetallic Materials; Vitrified Clay Pipe, Concrete Pipe; Fiber-Reinforced Cement Products; Mortars and Grouts; Masonry

Under the heading of chemical-resistant nonmetallic materials, this volume details specifications, tests, and practices that establish procedures for measuring the properties of mortars, grouts, and monolithic surfacing. Standards on mortar and grout for masonry construction, as well as test methods for masonry construction, as well as test methods for masonry as a construction material are examined. Others, relating to manufactured masonry units fix the property requirements for clay, shale, and concrete units in various applications. This volume also features specifications for concrete pipe, joints, manholes, vitrified clay pipe, clay drain tile, fiber-cement products, and precast concrete products.

ASTM 04.05
Available: June 2004



Thermal Insulation; Environmental Acoustics

Under the heading of thermal insulation, Volume 04.06 features specifications that establish property requirements for various types of insulation, including blanket, block, board, loose fill, cement, and pipe. Also included are tests, practices, and guides that call out procedures for the measurement of insulation properties as well as installation. Standards on environmental acoustics address community noise, acoustical materials and systems, mechanical and electrical system noise, open plan spaces, sound absorption, and sound transmission.

ASTM 04.06

Available: November 2004

Building Seals and Sealants; Fire Standards; Dimension Stone

Specifications, tests, and practices detail the property requirements for caulking and glazing compounds; structural, emulsion, hot-applied, and solvent-release sealants; lock-strip gaskets; aerosol foam sealants; pipe gaskets; waterproofing membranes; sealing tapes; and other building sealants. Also featured are standards on how to measure sealant properties, such as adhesion, low-temperature flexibility and aging effects. This volume also features standards that explain how to assess the fire performance and response of materials and how they respond to heat of flame under controlled conditions, as well as standards for fire risk assessment. Others cover dimension stone and stone cladding including stone anchors and anchorage systems.

ASTM 04.07

Available: November 2004

Soil and Rock (I): D 420 - D 5611

ASTM 04.08

Available: March 2004

Soil and Rock (II): D 5714 - latest

Combined, volumes 04.08 and 04.09 feature over 370 geotechnical and geoenvironmental standards. Volume 04.08 covers tests and practices that establish standard procedures for soil testing, including compaction, sampling, field investigation, soil texture, plasticity, density characteristics, moisture content, and hydrological and structural properties. Others focus on construction control, and ground water investigations, or detail test methods that explain how to measure the properties of soil-cement and tests for peats, mosses, and humus. Volume 04.09 covers site characterization, ground water investigation, and erosion and sediment control technology.

ASTM 04.09

Available: April 2004

Wood

Test methods feature how to perform chemical analysis of wood and how to evaluate mechanical and physical properties. Others detail structural grading, wood paving blocks, and modified wood. Under the heading of wood preservatatives, this volume covers specifications and tests that define procedures for chemically analyzing preservatives and evaluating their physical properties.

ASTM 04.10

Available: July 2004

Building Constructions (I): E 72 - E 1670

ASTM 04.11

Available: November 2004

Building Constructions (II): E 1671 - latest; Property Management Systems

Together, Volumes 04.11 and 04.12 contain over 230 tests and practices that set down standard procedures for measuring the performance of buildings, including: air leakage and ventilation performance; building economics; building preservation; durability performance of building constructions; structural performance; exterior insulation and finish systems; lead hazards associated with buildings; and performance of roof systems, windows, and doors. Volume 04.12 also includes standards that address property management systems. The latest standard practice for establishing the guiding principles of property management provides property managers with the means to examine the quality, quantity, and substance of a current or proposed system, as well as the context to determine how each element contributes to an efficient and cost-effective operation. Other standards cover the assessment of loss, damage, and destruction of property, assets, or material; physical inventory of durable, moveable property; administrative control of property, and traditional property management definitions and terms.

ASTM 04.12

Available: November 2004

Geosynthetics

Volume 04.13 focuses on the mechanical, endurance, permeability, and filtration properties of geosynthetics. This includes standards for geosynthetic Turf Reinforcement Mats (TRM's), designed to provide erosion protection for the design life of a project. Applications such as roadway stabilization and repair, erosion control, and soil drainage and reinforcement, as well as hydraulic barriers composed primarily of man-made polymer sheets or spray applied systems are included. Also featured are standards on geosynthetic clay liners.

ASTM 04.13

Available: May 2004

Save 25% when you buy all of Section 4 (Volumes 04.01 - 04.13)

Section 05: Petroleum Products, Lubricants, and Fossil Fuels

Petroleum Products and Lubricants (I): D 56 - D 3230

ASTM 05.01

Available: February 2004

Petroleum Products and Lubricants (II): D 3231- D 5302

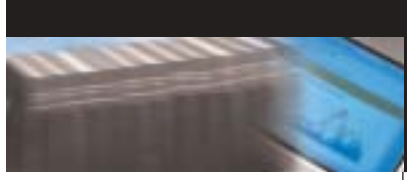
ASTM 05.02

Available: March 2004

Petroleum Products and Lubricants (III): D 5303 - D 6334

ASTM 05.03

Available: March 2004



Petroleum Products and Lubricants (IV): D 6335 - latest

Together, these 4 volumes feature 625 standards, including specifications and test methods that fix standard property requirements for fuels, oils, lubricants, and solvents. They also feature standard procedures for evaluating the properties of motor, diesel, biodiesel, aviation fuels, solvent hexane, and naphtha. Other standards focus on distillate and residual fuel oil, kerosene and illuminating oils. Some set down procedures for evaluating such properties as carbon residue, viscosity, cloud point, density, flash point, and sulfur content. Standard procedures detail how to measure the properties of natural and liquefied petroleum, pure light hydrocarbons, crude petroleum, wax and petrolatum, and hydraulic fluids. Tests and practices for evaluating the properties of film lubricants, lubricating greases, lubricating oil, used oils, cutting oils, and turbine oils appear under the heading of lubricants.

ASTM 05.04

Available: March 2004

Test Methods for Rating Motor, Diesel, and Aviation Fuels; Catalysts; Manufactured Carbon, and Graphite Products

This volume contains test methods for rating motor, diesel, and aviation fuels. It also covers test methods that are used to determine the knocking or detonation characteristics of motor and aviation fuels and the ignition characteristics of diesel fuels. Some tests evaluate catalytic materials, while others feature standard tests and practices for performing chemical and physical tests on manufactured carbon and graphite products.

ASTM 05.05

Available: February 2004

Gaseous Fuels; Coal and Coke

Under the heading of gaseous fuels, this volume provides tables and practices that fix standard procedures for sampling and calculating thermophysical properties. In addition, several tests define methods for analyzing the properties of gaseous fuels. Other tests and practices establish procedures for evaluating properties of coal and coke, and include sample preparation, as well as chemical and physical property measurement.

ASTM 05.06

Available: September 2004

Save 25% when you buy all of Section 5. (Volumes 05.01 - 05.06)

Section 06: Paints, Related Coatings and Aromatics

Paint – Tests for Chemical, Physical, and Optical Properties; Appearance

This volume features the latest test methods for the chemical, physical, and optical properties of paints. Some pertain to the chemical analysis of paints and paint materials, including determination of volatiles, nonvolatiles, pigments, water content, and other constituents. Others detail how to measure the physical properties of applied paint films, such as film thickness and adherence, physical strength, resistance to chemicals, and environmental factors. Standards on the physical and optical properties of liquid paints also appear. Tests and practices that pertain to the measurement of color and appearance of materials, including standards for photoluminescent safety materials also appear.

ASTM 06.01

Available: February 2004

Paint – Products and Applications; Protective Coatings; Pipeline Coatings

Volume 06.02 covers architectural finishes and paint products, such as traffic coatings, marine coatings, industrial protective coatings, and masonry treatments. Other standards examine paint applications in factories, coil coal metal, coatings on preformed products, printing inks, artists' paints, and paint application tools. Other subject areas include the determination of graffiti resistance and definitions for problems that develop with printed matter as a result of deficiencies in ink, substrate, or press. These definitions cover the three major printing processes: lithography, flexography, and gravure. Tests for applying and evaluating protective coatings and linings in power generation facilities, and standards on the durability of pipeline coatings and linings also appear in this volume.

ASTM 06.02

Available: February 2004

Paint – Pigments, Drying Oils, Polymers, Resins, Naval Stores, Cellulosic Esters, and Ink Vehicles

This volume includes specifications and test methods that establish property requirements for various pigments, including white, black, bronze, blue, and red; drying oils; resins; and polymers. Other standards pertain to naval stores, primarily rosins; others cover cellulosic esters; and several focus on ink vehicles and hydrocarbon resins.

ASTM 06.03

Available: March 2004

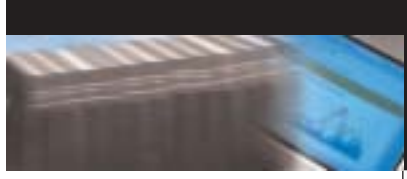
Paint – Solvents; Aromatic Hydrocarbons

Under the heading of solvents, this volume features specifications that establish the standard property requirements for various solvents, including aromatic hydrocarbons, alcohols, ketones, and esters. Accompanying the specifications are tests that define standard procedures for conducting physical and chemical tests on solvents and for determining solubility and miscibility. Others cover aromatic hydrocarbons and related chemicals, excluding those used as fuel or lubricants.

ASTM 06.04

Available: March 2004

Save 25% when you buy all of Section 6. (Volumes 06.01 - 06.04)



Section 07: Textiles

Textiles (I): D 76 - D 3218
ASTM 07.01
Available: November 2004

Textiles (II): D 3333 - latest
Volumes 07.01 and 07.02 feature over 340 textile-related standards covering the characteristics, properties, nomenclature, and uses of textiles. These tests, practices, and specifications cover:
- Apparel and Fabric
- Care Labeling
- Chemical Conditioning and Performance
- Cotton, Yarn, Fibers, Wool, and Felt
- Flammability and Flame-Resistance
- Glass Fiber
- Home Furnishings
- Inflatable Restraints
- Non-Woven Fabric
- Pile Floor Coverings
- Subassemblies, such as Zippers, Hooks, and Loops
- Tire Cord and Fabrics

Volume 07.02 also contains standard body measurement charts used for the sizing of apparel for men, women, children, and infants; standard guidelines for care labeling of apparel and other textile products; standards for UV protective fabrics and clothing; and a practice for stitches and seams, which has replaced the Federal standard for apparel end item stitch and seam structures used worldwide by government and industry textile organizations.
ASTM 07.02
Available: November 2004

Save 25% when you order all of Section 7 (Volumes 07.01 - 07.02)

Section 08: Plastics

Plastics (I): D 256 - D 2343
ASTM 08.01
Available: June 2004

Plastics (II): D 2383 - D 4322
ASTM 08.02
Available: June 2004

Plastics (III): D 4329 - latest
These 3 volumes feature over 400 plastics-related standards. Plastics test methods establish standard procedures for assessing physical, mechanical, optical, permanence, and thermal properties. Specifications fix standard property requirements for thermoplastic, thermosetting, and reinforced thermosetting materials. Others cover film and sheeting, and cellular plastics. Tests, specifications, and practices that pertain to environmentally degradable plastics, compostable plastics, plastic building products, recycled plastics, plastic lumber, and specimen preparation appear as well
ASTM 08.03
Available: July 2004

Plastic Pipe and Building Products
Half of the standards in this volume are specifications that establish standard property requirements for plastic pipe, tubing, and fittings, including ABS, CPVC, PB, PVC, polyethylene, reinforced thermosetting, and styrene-rubber. Also included are specifications for joints and seals and solvent cement. It also includes practices that define appropriate installation procedures, and concludes with specifications and accompanying test procedures for building products such as PVC windows.
ASTM 08.04
Available: January 2004

Save 25% when you order all of Section 8 (Volumes 08.01 - 08.04)

Section 09: Rubber

Rubber, Natural and Synthetic - General Test Methods; Carbon Black
ASTM 09.01
Available: July 2004

Rubber Products, Industrial - Specifications and Related Test Methods; Gaskets; Tires
Volume 09.01 contains tests and practices for evaluating rubber, rubber-like materials, and carbon black. Some general tests and practices fix standard procedures for performing chemical analysis, assessing processability, physical properties, aging and weathering effects, low temperature effects, and adhesion; while others evaluate compounding materials, carbon black, and synthetic rubbers, such as CR, IIR, IR, NBR, BR, and SBR. This volume also details standards on natural rubber, thermoplastic elastomers, and terminology.

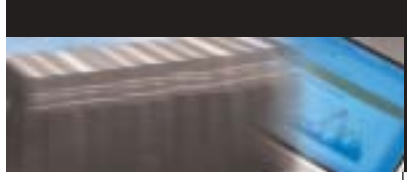
Volume 09.02 features specifications, tests, and practices for evaluating rubber products such as: consumer products; rubber surgical and examination gloves; automotive and aeronautical rubber; packing, seals, and gasket materials; hose and belting; coated fabrics; latex foam, sponge, and expanded cellular rubber. It includes various tests, practices, and guides that identify the performance characteristics of tires and specify criteria to evaluate them.

Volume 09.02 also features standards on gaskets, which specify, classify, or describe pertinent properties of commercial nonmetallic gaskets, enveloped gaskets, and laminate composite gasket materials (LCGM) for use with corrosion-resistant process equipment.
ASTM 09.02
Available: August 2004

Save 25% when you buy all of Section 9 (Volumes 09.01 - 09.02)

Section 10: Electrical Insulation and Electronics

Electrical Insulation (I): D 69 - D 2484
ASTM 10.01
Available: May 2004



Electrical Insulation (II): D 2518 - latest

Volumes 10.01 and 10.02 include standards covering:

- Ceramic and Mica Products
- Composite and Textile Materials
- Flexible Sheet, Tape, and Tubing
- Plates, Rods, and Molded Materials
- Electric Heating Unit Insulation and Electrical Tests
- Hook-Up and Magnet Wire Insulation
- Insulating Papers
- Insulated Wire and Cable
- Rubber Tape
- Solid Filling, Treating, Encapsulating, and Embedded Compounds
- Varnishes and Coatings
- General Methods of Testing

ASTM 10.02
Available: May 2004

Electrical Insulating Liquids and Gases; Electrical Protective Equipment

These standards on electrical insulating liquids and gases include specifications for materials such as mineral oil and askarels, and tests for assessing the properties of insulating liquids and gases. Also included are specifications and tests on tools, equipment, and materials used to protect workers from electrical hazards.

ASTM 10.03
Available: May 2004

Electronics

Volume 10.04 provides 130 standards related to electronics. Subjects include:

- Innerlayer Interconnections and Bonding
- Materials and Processes for Vacuum Tubes
- Electronic Device Characterization
- Hermetic Seals
- Hybrid Circuits and Substrates
- Microelectronic Packaging
- Leak Testing
- Electro-Optics
- Sputtering Targets
- Electronic Thin Films
- Compound Semiconductors
- Membrane Switches
- Photolithography
- Environmental Contamination Control

ASTM 10.04
Available: April 2004

Save 25% when you buy all of Section 10 (Volumes 10.01 - 10.04)

Section 11: Water and Environmental Technology

Water (I)

ASTM 11.01
Available: April 2004

Water (II)

These two volumes contain standard procedures for assessing water. Volume 11.01 is divided into four sections:

Terminology, Reagents, and the Reporting of Results – defines terminology relating to water, wastewater, reagent water, and fluvial sediment.

Sampling and Flow Measurement – examines open channel flow measurement, water sampling, and aqueous sampling. Also includes a practice on liquid filtration for comparing particle size in the use of alternative types of particle counters.

General Properties of Water; and Inorganic Constituents – explores how to assess such properties as pH, turbidity, corrosivity, and specific gravity.

Inorganic Constituents – demonstrates how to determine inorganic constituents.

Volume 11.02 is divided into 6 sections, and features standards on general specifications, technical resources, and statistical methods.

Organic Constituents – presents general analysis methods and tests for specific constituents and waterborne oils.

Radioactivity – includes measuring radioactivity and specific radionuclides.

Saline and Brackish Waters, Seawaters, and Brines – determines specific constituents such as barium, iodide and bromide, and chloride ions.

Microbal Examination – examines subjects such as coliphages and adenosine triphosphate (ATP) content.

Water-Formed Deposits – covers chemical microscopy, preparation and preliminary testing of water-formed deposits, and trace element extraction.

Water-Treatment Materials – features chemicals, particulate ion-exchange materials, membrane filters, and reverse osmosis devices.

ASTM 11.02
Available: May 2004

Atmospheric Analysis; Occupational Health and Safety; Protective Clothing

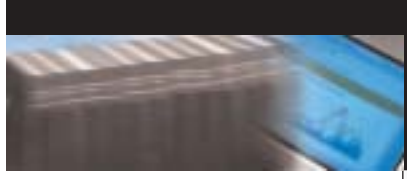
Volume 11.03 is divided into the following sections:

Sampling and Analysis of Atmospheres – fixes standard procedures for assessing ambient, indoor air, and workplace atmospheres; other standards measure items such as asbestos content, fluoride content, lead, sulfur-dioxide, and particulates. Also includes standards pertaining to gas filtration.

Occupational Health and Safety – presents health and safety aspects of working in various environments.

Protective Clothing – focuses on subjects such as resistance and thermal insulation of various materials used for protective clothing.

ASTM 11.03
Available: October 2004



Environmental Assessment; Hazardous Substances and Oil Spill Responses; Waste Management

This volume features the latest standards on:

Environmental Assessment – covers the latest versions of the popular ASTM environmental site assessment standards for Phase I and the Transaction Screen Process. Also appearing in this volume are other guides and practices on risk-based corrective action for petroleum and chemical releases, Phase II environmental site assessments, compliance audits, and estimating monetary costs and liabilities for environmental matters.

Hazardous Substances and Oil Spill Response – focuses on assessing spill response devices, sorbent performance, and ecological considerations when using chemical dispersants.

Waste Management – examines tests, practices, and guides focusing on: sampling and monitoring; physical and chemical characterization; site remediation thermal treatment; materials recovery; processing equipment; liner materials; and treatment.

ASTM 11.04
Available: September 2004

Biological Effects and Environmental Fate; Biotechnology; Pesticides

Topics covered:

Biological Effects and Environmental Fate – establishes standard procedures for assessing biological effects and environmental fate, including evaluating the properties, efficacy, safety, and impact in appropriate environments of pesticides and antimicrobiological agents.

Biotechnology – provides test methods, guides, and practices for identification of bacteriophage, handling of hazardous biological materials, and indirect and direct detection of mycoplasma.

Pesticides and Alternative Control Agents – focuses on areas such as evaluating the health hazards and effectiveness of certain pesticides, and evaluation of antimicrobial agents.

ASTM 11.05
Available: August 2004

Save 25% when you buy all of Section 11 (Volumes 11.01 - 11.05)

Section 12: Nuclear, Solar and Geothermal Energy

Nuclear Energy (I)

ASTM 12.01
Available: August 2004

Nuclear Energy (II), Solar, and Geothermal Energy

These two volumes feature over 300 nuclear-related standards. Volume 12.01 focuses on materials for nuclear reactor applications and covers:

Fuel and Fertile Materials – details property requirements for fuel and other related subjects..

Nuclear Grade Materials – establishes standard procedures for chemical, mass spectrometric, spectrochemical, nuclear, and radiochemical analysis of these materials.

Volume 12.02 covers:

Nuclear Technology and Applications – fdetails behavior and use of nuclear structural materials, dosimetry for radiation processing, food irradiation processing and packaging, nuclear radiation metrology, and decontamination and decommissioning of nuclear facilities and components.

Solar Energy – features standards on solar heating and cooling systems, measuring spectral response of photovoltaic cells or transmittance, and reflectance of sheet materials.

Fuel and Fertile Materials –examines geothermal field development, materials, and utilization.

ASTM 12.02
Available: September 2004

Save 25% when you buy all of Section 12 (Volumes 12.01 - 12.02)

Section 13: Medical Devices and Services

Medical and Surgical Materials and Devices; Anesthetic and Respiratory Equipment

This volume provides the latest standards for:

Medical and Surgical Materials and Devices – details specifications on metals, polymers, and ceramics for implants; prostheses; medical and surgical devices; devices used in arthroplasty and osteosynthesis; silicone elastomers, gels, and foams in medical applications; and tissue engineered medical products. Each standard typically covers manufacture, chemical requirements, mechanical requirements, special tests, and certification. Accompanying the specifications are test methods, practices, guides, classifications, and terminology.

Anesthetic and Respiratory Equipment – examines specifications related to anesthesia machines and monitors, laryngoscopes, bronchoscopes ventilators, and associated equipment.

ASTM 13.01
Available: September 2004

Emergency Medical Services; Search and Rescue

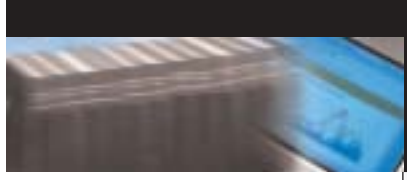
This volume provides the latest standards for:

Emergency Medical Services – covers emergency medical dispatch, ambulances, fixed wing basic and specialized units, basic training for emergency medical technicians.

Search and Rescue – appearing in this section are standards for search, rescue, and recovery operations, which cover testing and maintenance of equipment; management and operations, and personnel training.

ASTM 13.02
Available: September 2004

Save 25% when you buy all of Section 13 (Volumes 13.01 - 13.02)



Section 14: General Methods and Instrumentation

Healthcare Informatics

Volume 14.01 covers specifications and guides that address the transfer, management, security, and privacy of health information and the content of electronic health records. Other standards relate to eXtensible Markup Language (XML) Document Type Definitions (DTD).

ASTM 14.01

Available: June 2004

General Test Methods; Forensic Sciences; Terminology; Conformity Assessment; Statistical Methods

Over 160 standards cover:

Conformity Assessment – covers criteria for use in the evaluation of testing laboratories and proficiency testing and interlaboratory comparisons.

Forensic Sciences – provides test methods, practices, and guides for forensic investigations that cover criminalistics, engineering, questioned documents, and terminology.

Forensic Psychophysiology – examines guides and practices relating to polygraph training and education, and recommended factors in the design, conduct, and reporting of research on psychophysiological detections of deception.

Hazard Potential of Chemicals – covers flash point, thermal stability and instability, and autoignition temperatures.

Particle and Spray Characterization – provides standards on sieving and nonsieving methods, and screening media.

Quality and Statistics – features practices, test methods, and guides that evaluate statistical methods, sampling and data analysis, and quality statements.

Thermal Measurements – includes practices and test methods on thermal analysis and thermophysical properties.

ASTM 14.02

Available: July 2004

Temperature Measurement

Over 700 pages cover liquid-in-glass, thermometers and hydrometers, thermocouples, medical thermometers, and other related topics.

ASTM 14.03

Available: July 2004

Laboratory Apparatus; Degradation of Materials; SI; Oxygen Fire Safety

This volume contains the latest standards on:

The Modern Metric System – features the unified American National Standard IEEE/ASTM SI-10 Standard for the Use of the International System of Units (SI): The Modern Metric System.

Weathering and Durability – describes and evaluates outdoor and laboratory acceralated weathering tests, such as joint weathering projects, natural and environmental exposure tests and service life prediction.

Glassware Laboratory Apparatus – details requirements of glass beakers, tubes, flasks, and pipets.

Oxygen Fire Safety – focuses on controlling hazards and risks in oxygen systems.

ASTM 14.04

Available: July 2004

Save 25% when you buy all of Section 14 (Volumes 14.01 - 14.04)

Section 15: General Products, Chemical Specialties and End Use Products

Refactories; Activated Carbon; Advanced Ceramics

The majority of these standards pertain to refractories. Some establish procedures for assessing the types of refractories, while others are more specific and aimed at the properties of basic refractories, carbon and carbon-ceramic brick, fireclay refractories, insulating firebrick, mortars, plastics, and castables, and silicon refractories. Also included are tests for evaluating the properties of activated carbon such as pH and ball-pan hardness. It also contains several standards related to advanced ceramics testing.

ASTM 15.01

Available: March 2004

Glass; Ceramic Whitewares

This volume features standards for assessing the physical and chemical properties of glass and products made from it. Other standards establish procedures for measuring such properties as abrasion resistance, hardness, particle size, and strength of ceramic whiteware materials.

ASTM 15.02

Available: April 2004

Space Simulation and Applications of Space Technology; Aerospace and Aircraft; Composite Materials

These standards cover:

Composites – assesses properties of high modulus fibers such as fabric content, textile properties, and apparent shear strength.

Space Simulation and Applications of Space Technology – deals with contaminated cleanrooms, solar simulation for thermal balance testing of a spacecraft, and space simulation.

Aerospace Materials – features standards on cleaning materials, flammability, contamination, propellants, and transparent enclosures and materials.

ASTM 15.03

Available: October 2004

Soap and Other Detergents; Polishes; Leather; Resilient Floor Coverings

Volume 15.04 includes the latest standards for several distinct products:

Soaps and Other Detergents – establishes the chemical requirements for assorted soaps, alkaline detergents, and synthetic detergents; and fixes standard procedures for evaluating the properties of soaps and detergents.

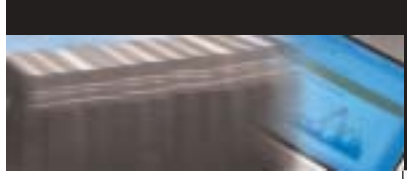
Polishes – defines how to evaluate such properties as acid number, black marking resistance, saponification number of waxes, powdering, and soil resistance.

Leather – fixes standard procedures for evaluating such properties as tear strength, bursting strength, tensile strength, and water absorption and resistance.

Resilient Floor Coverings – covers practices for floor preparation and installation procedures, and test methods for measuring the properties of floor coverings.

ASTM 15.04

Available: September 2004



Engine Coolants; Halogenated Organic Solvents and Fire Extinguishing Agents; Industrial and Speciality Chemicals

This volume features the latest standards on:

Engine Coolants – references coolant and ethylene glycol, and establishes standard procedures for performing physical, chemical, and performance tests.

Halogenated Organic Solvents and Fire Extinguishing Agents – focused on standards for virgin and reclaimed halogenated solvents and substitutes for ozone depleting chemicals. Also includes specifications that establish standard properties for dry cleaning grade and vapor-degreasing grade solvents; and specifications for the handling, transportation, and storage of compressed gases.

Industrial and Specialty Chemicals – features test methods for the analysis and testing of single elements, compounds, or simple mixtures of these in various stages of purity for consumption, primarily by the chemical industry for further conversion.

ASTM 15.05

Available: August 2004

Adhesives

These specifications establish the standard property requirements for several types of adhesives. Accompanying the specifications are practices and tests for evaluating the working properties and durability of various adhesives.

ASTM 15.06

Available: August 2004

Sports Equipment; Safety and Traction for Footwear; Amusement Rides; Consumer Products; Light Sport Aircraft

Volume 15.07 covers:

Sports Equipment, Surfaces, and Facilities – examines standards for items such as football helmets, eye protectors, paintball, and playground surfacing. These baseball helmet and bicycle helmets tests not found in ANSI or SNELL standards.

Consumer Products – details consumer safety specifications, guides, and performance requirements for products such as public and home playground equipment, juvenile products, toy safety, and pool alarms.

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The new 2004 Edition of the ASME Boiler & Pressure Vessel Code (BPVC) contains thousands of pages of new code, standards, and figures. The 2004 edition includes Section II-D, which has been separated into Customary and Metric volumes, and Section XII Rules for Construction and Continued Service of Transport Tanks, which is a new section that may soon be referenced by the Department of Transportation. ASME BPVC is an internationally recognized code for the latest rules of safety for design, fabrication, maintenance and inspection of boilers and pressure vessels, power producing machines and associated subsystems, and nuclear power plant components. Global is pleased to provide you with the Boiler Code at reduced 2004 pricing and the addenda and interpretations are available at no additional charge.

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ASME S0003A
ASME S0003A ADDENDA

Section III: Division 2 - Code for Concrete Reactor Vessels and Containments
ASME S00032
ASME S00032 ADDENDA

Section III: Division 3 Containment Systems for Storage and Transport Packagings of Spent Nuclear Fuel and High Level Radioactive Material and Waste Rules
ASME S00033
ASME S00033 ADDENDA

ASME BPVC Section III - Rules for Construction of Nuclear Power Plant Components - Complete Section III - on CD-ROM
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IHS TX3

SECTION IV: Heating Boilers

Section IV: Rules for Construction of Heating Boilers
ASME S00040
ASME S00040 ADDENDA

ASME BPVC Section IV: Heating Boilers on CD-ROM
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IHS TX4

SECTION V: Nondestructive Examination

Section V: Nondestructive Examination
ASME S00050
ASME S00050 ADDENDA

ASME BPVC Section V: Nondestructive Examination on CD-ROM
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IHS TX5

SECTION VI: Recommended Rules for the Care and Operation of Heating Boilers

Section VI: ASME Boiler & Pressure Vessel Committee Subcommittee on Heating Boilers Subgroup on Care & Operation Heating Boilers (SC IV)
ASME S00060
ASME S00060 ADDENDA

ASME Boiler & Pressure Section VI - Recommended Rules for Care and Operation of Heating Boilers on CD-ROM
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IHS TX6A

SECTION VII: Recommended Guidelines for the Care of Power Boilers

Section VII: Recommended Guidelines for the Care of Power Boilers
ASME S00070
ASME S00070 ADDENDA

ASME Boiler & Pressure Section VII - Recommended Guidelines for Care of Power Boilers on CD-ROM
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IHS TX7A

SECTION VIII: Pressure Vessels

Section VIII: Pressure Vessels Division 1
ASME S00081
ASME S00081 ADDENDA

Section VIII: Division 2 - Alternative Rules
ASME S00082
ASME S00082 ADDENDA

Section VIII: Division 3 - Alternative Rules for Construction of High Pressure Vessels
ASME S00083
ASME S00083 ADDENDA

ASME Boiler & Pressure Section VIII - Pressure Vessels on CD-ROM
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IHS TX8A

SECTION IX: Welding and Brazing Qualifications

Section IX: Qualification Standard for Welding and Brazing Procedures, Welders, Brazers, and Welding and Brazing Operators
ASME S00090
ASME S00090 ADDENDA

ASME BPVC Section IX: Welding and Brazing Qualifications on CD-ROM
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IHS TX9A

SECTION X: Fiber-Reinforced Plastic Pressure Vessels

Section X: ASME Boiler & Pressure Vessel Committee Subcommittee on Fiber-Reinforced Plastic Pressure Vessels
ASME S00100
ASME S00100 ADDENDA

ASME Boiler & Pressure Section X - Fiberglass-Reinforced Plastic Pressure Vessels on CD-ROM
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IHS TX1A

SECTION XI: Rules for Inservice Inspection of Nuclear Power Plant Components

Section XI: Rules for In-Service Inspection of Nuclear Power Plant Components
ASME S00011
ASME S00011 ADDENDA

ASME Boiler & Pressure Section XI - Rules for In-Service Inspection of Nuclear Power Plant Components on CD-ROM
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Code Cases

Boilers and Pressure Vessels: Code Cases
ASME S00120
ASME S00120 ADDENDA

ASME Boiler & Pressure Code Cases - Boiler and Pressure Vessels on CD-ROM
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IHS TX3A

Nuclear Components: Code Cases
ASME S0012N
ASME S0012N ADDENDA

ASME Boiler & Pressure Code Cases - Nuclear on CD-ROM
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IHS TX4A

Binders for Boiler Pressure Vessels Codes
ASME S00140

Receive 30 FREE Binders with Purchase of Complete Set!

ASME/BPVC - Complete Without Referenced Standards on CD-ROM
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ASME BPVC Nuclear on CD-ROM
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IHS TX8

ASME BPVC Non-Nuclear on CD-ROM
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Includes Sections I, II, V, VIII, IX, X, Code Cases and Referenced Standards.
IHS TXU7

ASME BPVC Interpretations on CD-ROM
Call for quote
IHS TX10

American Petroleum Institute (API)

Pressure Vessel Inspection Code: Maintenance Inspection, Rating, Repair & Alteration
Covers the maintenance inspection, repair, alteration, and rating procedures for pressure vessels used by the petroleum and chemical process industries. Applies to vessels that have been placed in service and have been inspected by an authorized inspection agency or repaired by a repair organization.
API 510

American Petroleum Institute (API)

Pressure Vessel Inspection Code: Maintenance Inspection, Rating, Repair & Alteration
Covers the maintenance inspection, repair, alteration, and rating procedures for pressure vessels used by the petroleum and chemical process industries. Applies to vessels that have been placed in service and have been inspected by an authorized inspection agency or repaired by a repair organization.
API 510

Materials and Fabrication Requirements for 2-1/4 CR-1MO and 3CR-1MO Steel Heavy Wall Pressure Vessels for High Temperature, High Pressure Hydrogen Service
API RP 934

Inspection of Fired Boilers and Heaters
API RP 573

Tank Inspection, Repair, Alteration, and Reconstruction
API STD 653

Sizing, Selection, and Installation of Pressure - Relieving Devices in Refineries

Part I - Sizing and Selection
Applies to the sizing and selection of pressure relief devices for equipment that has a maximum allowable working pressure (MAWP) of 15 psig (103 kPag) or greater.
API RP 520 P1

Part II - Installation
Covers the methods of installation for pressure relief devices for equipment that has a maximum allowable working pressure (MAWP) of 15 psig (1.03 bar g) or greater.
API RP 520 P2

Inspection of Pressure Vessels (Towers, Drums, Reactors, Heat Exchangers, & Condensers)
Covers the inspection of pressure vessels. It includes a description of the various types of pressure vessels and the standards that can be used for their construction and maintenance. The reasons for inspection, the causes of deterioration, the frequency and methods of inspection, the methods of repair, and the preparation of records and reports are also covered. Safe operation is emphasized.
API RP 572

Digest of State Boiler, Pressure Vessel, Piping and Above Ground Storage Tank Rules and Regulations
API PUBL 910

ASME International (ASME)

Section V: Nondestructive Examination
ASME S00050

Section VIII: Pressure Vessels Division 1
ASME S00081

Section IX: Qualification Standard for Welding and Brazing Procedures, Welders, Brazers, and Welding and Brazing Operators
ASME S00090

Power Piping
Prescribes minimum requirements for the design, materials, fabrication, erection, test, and inspection of power and auxiliary service piping systems for electric generation stations, industrial institutional plants, central and district heating plants. Includes Code Case #25.
ASME B31.1

Process Piping
ASME B31.3

ASME International Accreditation Standards

The following related standards are necessary for accreditation purposes.

Power Piping
Prescribes minimum requirements for the design, materials, fabrication, erection, test, and inspection of power and auxiliary service piping systems for electric generation stations, industrial institutional plants, central, and district heating plants. Includes Code Case #25.
ASME B31.1

Pressure Relief Devices
ASME PTC 25

Quality Assurance Requirements for Nuclear Facilities Applications
ASME NQA 1

Section V: Nondestructive Examination
ASME S00050

Section VIII: Pressure Vessels Division 1
ASME S00081

Section IX: Qualification Standard for Welding and Brazing Procedures, Welders, Brazers, and Welding and Brazing Operators
ASME S00090

Power Piping
Prescribes minimum requirements for the design, materials, fabrication, erection, test, and inspection of power and auxiliary service piping systems for electric generation stations, industrial institutional plants, central and district heating plants. Includes Code Case #25.
ASME B31.1

Process Piping
ASME B31.3

ASME International Standards Referenced in the ASME BPVC

Listed below are some of the critical standards referenced in the ASME BPVC.

Scheme for Identification of Piping Systems
This standard is intended to establish a common system to assist in identification of hazardous materials conveyed in piping systems and their hazards when released in the environment. This scheme concerns identification of contents of piping systems in industrial and power plants. It is also recommended for the identification of piping systems used in commercial and institutional installations, and in buildings used for public assembly. It does not apply to pipes buried in the ground nor to electrical conduits.
ANSI A13.1

Pipe Flanges & Flanged Fittings
Covers pressure-temperature ratings, materials, dimensions, tolerances, marking, testing, and methods of designating openings for pipe flanges and flanged fittings in sizes NPS 1/2 through NPS 24 and in rating Classes 150, 300, 400, 600, 900, 1500, and 2500. Flanges and flanged fittings may be cast, forged, or (for blind flanges and certain reducing flanges only) plate materials as listed in Table 1A. Requirements and recommendations regarding bolting and gaskets are also included.
ANSI B16.5

Cast Bronze Threaded Fittings Class 125 & 250
ANSI B16.15

Process Piping
ASME B31.3

Personnel and Burden Carriers
ANSI B56.8

Knurling
ANSI B94.6

Controls and Safety Devices for Automatically Fired Boilers
ASME CSD 1

British Standards Institution (BSI)

Specification for Inspection, Access and Entry Openings for Pressure Vessels
BS 470

Pressure Vessel Details (Dimensions) - Part 1. Specification for Davits for Branch Covers of Steel Vessels
BS 5276 P1

Specification for Unfired Fusion Welded Pressure Vessels
BS PD 5500

Unfired Pressure Vessels

Part 1: General
BS EN 13445-1

Part 2: Materials
BS EN 13445-2

Part 3: Design
BS EN 13445-3

Part 4: Fabrication
BS EN 13445-4

Part 5: Inspection and Testing
BS EN 13445-5

Part 6: Requirements for the Design and Fabrication of Pressure Vessels and Pressure Parts Constructed from Spheroidal Graphite Cast Iron
BS EN 13445-6

Part 7: Guidance on the use of the Conformity Procedures
BS PD CR 13445-7

Deutsches Institut fur Normung, e.V. (DIN)

Technical Rules for Pressure Vessels
AD MERKBLATTER

Technical Delivery Conditions for Steel Castings for Pressure Purposes - General
DIN EN 10213 P1

European Council/Commission Legislative Documents

Directive of the European Parliament and of the Council on the Approximation of the Laws of the Member States Concerning Pressure Equipment
EEC/97/23

British Standards Institution (BSI)

General Criteria for Supplier's Declaration of Conformity
BS EN 45014

British Standards Institution (BSI)

British Standards Institution (BSI) Membership Information
Companies located in the U.S. or Canada who buy a BSI membership are entitled to benefits that include a 29% discount on BSI standards, a 5% discount on related standards and specifications, monthly BSI updates, copies of the BSI catalog and a range of other services.
BSI MEMBERSHIP

General Criteria for Supplier's Declaration of Conformity
BS EN 45014

European Committee for Standardization

The New Approach - Legislation and Standards on the Free Movement of Goods in Europe
Contains legislation and standards on the free movement of goods in Europe, the New Approach is formatted to guide you through the maze of requirements for selling goods in Europe. Includes: detailed analysis of the New Approach Directives and Harmonized Standards, references hundreds of adopted European Standards (EN), and standards in the process of being adopted.
NEW APPROACH

European Council/Commission Legislative Documents

Directive of the European Parliament and of the Council on the Approximation of the Laws of the Member States Concerning Pressure Equipment
EEC/97/23

Council Directive on the Harmonization of the Laws of Member State Relating to Electrical Equipment Designed for use Within Certain Voltage Limits
EEC/73/23

Council Directive on the Approximation of the Laws of the Member States Relating to Electromagnetic Compatibility
EEC/89/336

Electromagnetic Compatibility
See Also EEC/91/263 & EEC/89/336
EEC/92/31

Council Directive Concerning Medical Devices
EEC/93/42

Amending Directives 87/404/EEC (Simple Pressure Vessels), 88/378/EEC (Safety Of Toys), 89/106/EEC (Construction Products), 89/336/EEC (Electromagnetic Compatibility), 89/392/EEC (Machinery), 89/686/EEC (Personal Protective Equipment), 90/384/EEC (NON-AUTO)
EEC/93/68

Modules for the Various Phases of the Conformity Assessment Procedures and the Rules for the Affixing and use of the CE Conformity Marking, Which are Intended to be used in the Technical Harmonization Directives
EEC/93/465

Directive of the European Parliament and of the Council on the Approximation of the Laws of the Member States Concerning Pressure Equipment
EEC/97/23

Directive 98/37/EEC of the European Parliament and of the Council of 22 June 1998 on the Approximation of the Laws of the Member States Relating to Machinery
EEC/98/37

National Electrical Manufacturers Association (NEMA)

Conformity Assessment Guide
This guide is designed to be a practical handbook to facilitate the efforts of electrical and electronic manufacturers in introducing and marketing products in selected locations around the globe. It is divided into the three major geographical areas: The Americas, Asia, and Europe. It is further divided by country. Topics also include the IEC CB and IEC EX schemes.
NEMA CONFORMITY ASSESS

NEMA Electrical Product Acceptance in Europe: NEMA's Guide to Europe's New Approach Directives and CE Marking
Comprehensively reviews the three directives affecting NEMA products, i.e., machinery, EMC, and low voltage, as well as summary overviews of directives on medical devices and explosives atmospheres. NEMA Electrical explains the self-declaration process, third party certification, conformity compliance, and the relationship between different standards in directive compliance. Includes a glossary of frequently used terms, appendices of supporting information, and examples of required forms.
NEMA ELECTRICAL PRODUCT

SIMCOM

The European Union Electromagnetic Compatibility Directive: 89/336/EEC - A Technical Professional's Guidance Manual for Legal European Trade

Highlights include: EC Commission Interpretive Guidelines, an updated list of harmonized standards, detailed clarification on issues such as components and systems, explanation of when to test and when to use a Technical Construction File, and a complete list of Competent and Notified Bodies.

SIMCOM ELECTROMAGNETIC

The European Union's Low Voltage Directive 73/23/EEC: A Technical Professional's Guidance Manual for Legal European Trade

Highlights include: EC Commission Interpretive Standards and New standards. Includes a SIMCOM Compliance Verification Report book of your choice, a unique set of engineering handbooks to keep you in compliance with EN 60204-1 and EN 60950 or EN 61010-1.

SIMCOM LOW VOLTAGE

The European Union Machinery Directive: Compliance Manual for Trade

Highlights include: EC Commission Interpretive Guidelines, an updated list of EN Harmonized Standards, questions and answers approved by the 89/392 Committee, and a list of bodies notified under the Directive.

SIMCOM MACHINERY

European Commission Proposals for Amending the Machinery Directive 89/392/EEC

SIMCOM MACHINERY AMEND

The Machinery Manual, Accompanying the Overview Manual and the European Commission Proposals for Amending the Machinery Directive 89/392/EEC

SIMCOM MACHINERY MANUAL

An overview of the EUs New Approach Directives: Understanding the European Union's Single Internal Market

SIMCOM OVERVIEW

SIMCOM Compliance Verification Report (Cover): EN 60204-1

SIMCOM COVER EN 60204-1

SIMCOM Compliance Verification Report (Cover): EN 61010

SIMCOM COVER EN 61010

The Institute of Electrical & Electronics Engineers, Inc. (IEEE)

CE-Mark Handbook: The New European Legislation for Products

IEEE CE-MARK HDBK

CE Marking for Medical Devices: A Handbook to the Medical Devices Directives

IEEE CE MARKING

CE Marking for Telecommunications: A Handbook to the Telecommunications Directive

IEEE CE MARKING FOR

Underwriters Laboratories, Inc. (UL)

By Demko a Subsidiary of UL

CE From A to Z, CE Marking According to the Machinery Low Voltage and EMC Directives

CE MARKING FROM A TO Z

National Electrical Manufacturers Association (NEMA)

Z535 Standards for Safety Signs and Colors Set
Includes ANSI Z535.1 through ANSI Z535.5
ANSI Z535 SERIES

American Association of Textile Chemists and Colorists (AATCC)

Colorfastness to Acid and Alkalis
Test specimens are evaluated for resistance to simulated action of acid fumes, sizes, alkaline sizes, alkaline cleansing agents, and alkaline street dirt. These test methods are applicable to textiles made from all fibers in the form of yarns or fabrics, whether dyed, printed or otherwise colored.
AATCC 6

Colorfastness to Crocking: AATCC Crockmeter Method
This test method is designed to determine the amount of color transferred from the surface of colored textile materials to other surfaces by rubbing. It is applicable to textiles made from all fibers in the form of yarn or fabric whether dyed, printed or otherwise colored.
AATCC 8

Colorfastness to Light
This test method provides the general principles and procedures which are currently in use for determining the colorfastness to light of textile materials. The test options described are applicable to textile materials of all kinds and for colorants, finishes and treatments applied to textile materials.
AATCC 16

Antibacterial Finishes on Textile Materials: Assessment of
This test method provides a quantitative procedure for the evaluation of the degree of antibacterial activity. Assessment of antibacterial activity intended in the use of such materials.
AATCC 100

Colorfastness to Water
This test method is designed to measure the resistance to water of dyed, printed, or otherwise colored textile yarns and fabrics of all kinds.
AATCC 107

Oil Repellency: Hydrocarbon Resistance Test
This test method detects the presence of a fluorochemical finish, or other compounds capable of imparting a low energy surface, on all types of fabrics, by evaluating the fabric's resistance to wetting by a selected series of liquid hydrocarbons of different surface tensions.
AATCC 118

Water Resistance: Hydrostatic Pressure Test
This test method measures the resistance of a fabric to the penetration of water under hydrostatic pressure. It is applicable to all types of fabrics, including those treated with a water resistant or water repellent finish.
AATCC 127

CMC: Calculation of Small Color Differences for Acceptability
AATCC 173

AATCC Technical Manual of the American Association of Textile Chemists and Colorists
AATCC TECHNICAL MANUAL

American Petroleum Institute (API)

Using the API Color-Symbol System to Mark Equipment and Vehicles for Product Identification at Service Stations and Distribution Terminals.
A guide to the API color-symbol system for marking petroleum product distribution equipment and facilities and describes the use of the system to mark equipment and vehicles at service stations and distribution terminals. (Includes one 1637A color chart.)
API RP 1637

Equipment Marking Color Symbol System Chart
This chart displays each element of the equipment marking color-symbol for product identification at service stations and distribution terminals (in color). Two-sided, laminated.
API PUBL 1637A

Available only in packets of 10

ASTM International (ASTM)

ASTM Standards on Color and Appearance Measurement- 6th Edition
Contains 90 ASTM International standards and nine ISO and ISO/CIE standards used in appearance analysis for a variety of materials and products, such as Acoustical Materials, Petroleum Products, Plastics, Paints, Traffic Marking Materials, and Pavement Surfaces. Also includes a list of 99 related standards (title only).
ASTM COLOR

Includes CD-ROM

Standard Test Method for ASTM Color of Petroleum Products (ASTM Color Scale)
This test method covers the visual determination of the color of a wide variety of petroleum products such as lubricating oils, heating oils, diesel fuel oils, and petroleum waxes.
ASTM D 1500

Standard Practice for Specifying Color by the Munsell System
ASTM D 1535

Electronic Industries Alliance (EIA)

Colors for Color Identification and Coding
This standard specifies the color ranges used to identify electronic components, equipment, and wire and cable insulation, and establishes a standard color-number relationship. Materials to be color coded are separated into two categories, and nominal colors and tolerance ranges are established for each. For instrumental testing, categories of specialized color charts are specified.
EIA-359

Federal Standards

Colors Used in Government Procurement - Vol. 1 - Std. and Color Samples
This standard presents the colors used by Government Activities in a format suitable for color selection, color matching and for quality control inspection. This document describes the designation and use of the color chips of this standard. For reference purposes, each color is reproduced within as a 1/2 x 1 inch sample.
FED-STD-595 V1

Colors Used in Government Procurement
Fan Deck - Suitable for color identification and selection.
FED-STD-595 FAN DECK
FED-STD-595

International Organization for Standardization (ISO)

Graphic Technology - Colour and Transparency of Ink Sets for Four-Colour-Printing - Part 1: Sheet - Fed and Heat - Set Web Offset Lithographic Printing
ISO 2846-1

Graphic Technology - Colour and Transparency of Ink Sets for Four-Colour-Printing - Part 2: Coldset Offset Lithographic Printing
ISO 2846-2

CIE Standard Colormetric Illuminants
ISO 10526

CIE Standard Colormetric Observers
ISO/CIE 10527

Munsell Products

Munsell Book of Color Glossy Collection
Two volume set of removable color chips arranged on 40 constant hue charts, plus 4 Munsell Gray charts and 3 supplementary color charts.
MUNSELL BOOK OF COLOR

Munsell Color Charts for Color Coding
This Fourth Edition has been widely adopted throughout the world, as well as by EIA. Color regions are specified for ten color names: Red, Orange, Brown, Yellow, Green, Blue, Violet (Purple), White, Gray (Slate) and Black. Each chart defines the Centroid color and the permissible tolerances.
MUNSELL COLOR CHARTS

Includes 8 1/2 x 11 Chart, 3 x 5 Swatches, and Loose-leaf Binder.

Munsell Soil Color Charts
MUNSELL SOIL COLOR CHARTS

Munsell 50051 (Aqua)
MUNSELL 50051

Munsell 50052 (Rose)
MUNSELL 50052

National Electrical Manufacturers Association (NEMA)

Safety Color Code
Contains information needed to specify colors for safety signs used in environmental and facility applications, and for accident prevention tags used to alert persons to temporary hazards.
ANSI Z535.1

Environmental and Facility Safety Signs
Contains information needed to specify formats used in environmental and facility applications.
ANSI Z535.2

Criteria for Safety Symbols
Contains information needed to specify formats and symbols for safety signs and accident prevention tags used in environmental and facility applications and for product applications.
ANSI Z535.3

Product Safety Sign and Label
Contains information needed to specify formats for safety signs used in product applications.
ANSI Z535.4

Accident Prevention Tags
Contains information needed to specify formats, colors, and symbols of safety tags used to alert persons to temporary hazards.
ANSI Z535.5

Z535 Standards for Safety Signs and Colors Set
Includes ANSI Z535.1 through ANSI Z535.5.
ANSI Z535 SERIES
ANSI Z535 SERIES CD

Safety Color Chart
For Information and Use with ANSI Z535.1 through ANSI Z535.5.
ANSI Z535 COLOR CHART

SAE International (SAE)

Colors, Aeronautical Lights and Lighting Equipment, General Requirements for
SAE AS 25050

Color Tolerance Set - Color Charts for SAE J1128 - (Low Tension Primary Cable)
SAE EA 1128

Instrumental Color Difference Measurement for Exterior Finishes, Textiles and Colored Trim
SAE J1545

The Institute of Electrical & Electronics Engineers, Inc. (IEEE)

Complete Set of IEEE Color Books
IEEE COLOR BOOKS SET
IEEE COLOR BOOKS SET CD

American Association of State Highway Transportation Official (AASHTO)

American Association of State Highway and Transportation Officials (AASHTO) Publications Catalog
AASHTO INDEX

Guide for Design of Pavement Structures
AASHTO GDPS

Standard Specifications for Highway Bridges
Interim HBI-97 to HBI-02
AASHTO HB

AASHTO LRFD Bridge Design Specifications - Standard & Metric Set
AASHTO LRFD EM

LRFD Bridge Design Specifications SI Units (Metric)
Includes Interim
AASHTO LRFD SI

Standard Specification for Transportation Materials and Methods of Sampling and Testing
AASHTO HM

Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals
AASHTO LTS

American Concrete Institute (ACI)

Specifications for Structural Concrete
ACI 301

Specifications for Structural Concrete (Metric)
ACI 301M

Guide for Measuring, Mixing, Transporting and Placing Concrete
ACI 304R

Building Code Requirements for Structural Concrete and Commentary
ACI 318-02

Building Code Requirements for Structural Concrete (ACI 318-02) and Commentary (ACI 318R-02)
ACI 318/318R

Guide to Framework for Concrete
ACI 347

Building Code Requirements for Masonry Structures & Specification for Masonry Structures and Related Commentaries
ACI 530

Manual of Concrete Practice Parts 1-6
ACI MCP SET
ACI MCP SET CD

American Institute of Steel Construction (AISC)

Manual of Steel Construction ASD
AISC M016

Manual of Steel Construction Volume II - Connections
AISC M017

ASD Manual V.#1: Manual of Steel Construction Allowable Stress Design V.#2 Manual of Steel Construction Connections
Two-volume set.
AISC M021

LRFD Manual of Steel Construction
Incorporates AISC M018, M019 and M020L.
AISC M025

A Guide to Engineering and Quality Criteria for Steel Structures
AISC S323

American Society of Heating, Refrigerating & Air Conditioning Engineers (ASHRAE)

Ventilation for Acceptable Indoor Air Quality
ASHRAE STD 62

American Society of Heating, Refrigerating & Air Conditioning Engineers (ASHRAE)

Laboratory Methods of Testing Fans for Rating
ASHRAE STD 51

Ventilation for Acceptable Indoor Air Quality
ASHRAE STD 62

Energy Standard for Buildings Except Low-Rise Residential
ASHRAE STD 90.1

Method of Testing to Determine Flow Resistance of HVAC Ducts and Fittings
ASHRAE STD 120

Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs
ASHRAE STD 140

ASME International (ASME)

Safety Code for Elevators and Escalators
ASME A17.1

American Welding Society (AWS)

New Revision

Bridge Welding Code
This code covers the welding requirements for AASHTO welded highway bridges made from carbon and low-alloy constructional steels. This edition contains dimensions in metric SI Units and U.S. Customary Units. Sections 1 through 7 constitute a body of rules for the regulation of welding and in steel construction. Section 9 of the previous edition has had its provisions distributed throughout this edition. Sections 8, 10, and 11 do not contain provisions, as their analogue D1.1 sections are not applicable to the D1.5 Code. Section 12 contains the requirements for fabricating fracture critical members.
AASHTO/AWS D1.5M/D1.5

American Welding Society (AWS)

The AWS codes and standards listed below, are described in detail in the 'Welding Section' of this catalog.

Standard Symbols for Welding, Brazing, and Nondestructive Examination
Please see page for a complete description.
AWS A2.4

Standard Welding Terms and Definitions; Including Terms for Adhesive Bonding, Brazing, Soldering, Thermal Cutting, and Thermal Spraying
Please see page 104 for a complete description.
AWS A3.0

Structural Welding Code - Steel
AWS D1.1/D1.1 M
IHS AWSC

Structural Welding Code - Aluminum
Please see page 104 for a complete description.
AWS D1.2

Structural Welding Code - Sheet Steel
Please see page 170 for a complete description.
AWS D1.3

Structural Welding Code - Reinforcing Steel
Please see page 165 for a complete description.
AWS D1.4

Bridge Welding Code
Please see page 169 for a complete description.
AASHTO/AWS D1.5M/D1.5

Structural Welding Code - Stainless Steel
Please see page 165 for a complete description.
AWS D1.6

Sheet Metal Welding Code
AWS D9.1M/D9.1

ASME International (ASME)

Safety Code for Elevators and Escalators
ASME A17.1

Inspector's Manual for Elevators & Escalators
ASME A17.2

Safety Standard for Low Lift & High Lift Trucks
ASME B56.1

ASTM International (ASTM)

Annual Book of ASTM Standards - Section 4- Construction
ASTM SECTION 4

ASTM Standards in Building Codes
4 Volumes. Satisfies international code requirements established by the complete set of the International Codes published by the ICC, which is comprised of BOCA, SBCCI and ICBO.
ASTM BUILDING CODES

Standard Terminology of Building Constructions
ASTM E 631

British Standards Institute (BSI)

Code of Practice Fire Precautions in the Design, Construction and Use of Buildings
Parts 1, 4, 5, 6, 7, 8, 9, 10, 11
BS 5588 (Part 1 through Part 11)

Design Management Systems - Part 4. Guide to Managing Design in Construction
BS 7000 P4

Code of Practice for Sound Insulation and Noise Reduction for Buildings
BS 8233

Special Requirements for Construction, Testing and Marking of Electrical Apparatus of Equipment Group II, Category 1 G
BS EN 50284

Builders Hardware Manufacturers Association (BHMA)

Door Controls - Closers
ANSI A156.4

Cabinet Hardware
ANSI A156.9

Power Operated Pedestrian Doors
ANSI A156.10

Materials and Finishes
ANSI A156.18

Power Assist and Low-Energy Power-Operated Doors
ANSI A156.19

BICSI

Cable Installation Manual
BICSI's Cable Installation Manual is the ideal job function-related reference manual for telecommunications cabling installers. Based on the latest industry standards and codes, the manual provides cabling installation personnel with guidelines (including appropriate "how to" information) necessary to perform specific tasks of their job.
BICSI CABLE INSTALLATION

Telecommunications Distribution Methods Manual
Extremely valuable to telecommunications infrastructure designers of commercial and multi-family residential buildings the Telecommunications Distribution Methods Manual (TDMM), provides a comprehensive overview of telecommunications distribution, from design through construction, installation, and maintenance.
BICSI TELECOMMUNICATIONS

Canadian Standards Association

Construction Plus- A Guide to CSA Construction Standards
CSA PLUS 4000

New Edition

Canadian Electrical Code - Part 1: Safety Standard for Electrical Installations
Updated every four years.
CSA C22.1

Canadian Electrical Code - Part 1
Looseleaf version
CSA C22.1 (LL)

General Requirements - Canadian Electrical Code, Part II
CSA C22.2 #0

Deutsches Institut fur Normung, e.V. (DIN)

Mechanical Engineering
DIN HDBK 1

Mechanical Engineering - Basic Standards 2
DIN HDBK 3

Building and Civil Engineering 3 - Standards for Timber Construction
DIN HDBK 34

Building and Civil Engineering 6 - Standards for Plain and Reinforced Concrete Construction
DIN HDBK 37

Building and Civil Engineering 10 - Standards for Housing Construction
DIN HDBK 110

Design Loads for Building; Live Loads
DIN 1055 P3

FM Approvals

Factory Mutual Research has long been a leader in the evaluation of roofing materials. Using both full-scale and small-scale testing, FM engineers have analyzed materials for their ability to limit fire spread and their capacity to withstand the elements of weather, corrosion and foot traffic. You may buy these standards individually, or order the set of four for a discounted price.

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CONSTRUCTION INDUSTRY TRENDS

International Association of Plumbing & Mechanical Officials (IAPMO)

Plastic Bathtub Units
ANSI Z124.1

Plastic Shower Units
ANSI Z124.2

Plastic Lavatories
ANSI Z124.3

Plastic Water Closet Bowls and Tanks
ANSI Z124.4

Plastic Toilet (Water Closet) Seats
ANSI Z124.5

Plastic Sinks
ANSI Z124.6

International Code Council (ICC)

International Building Code
The International Building Code (formerly Uniform Building Code) is the most widely adopted model building code in the world. Provides complete structural, fire and life-safety provisions covering seismic, wind, accessibility, egress, occupancy, roofs, and more!
ICC IBC

International Code Council (ICC)

Guidelines for Accessible and Usable Buildings and Facilities
ANSI A117.1

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CABO ONE & TWO FAMILY LL
CABO ONE & TWO FAMILY SC

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International Residential Code
A comprehensive code for homebuilding that brings together all building, plumbing, mechanical and electrical provisions for one and two-family residences.
ICC IRC

International Existing Building Code
Provides provisions for improving and upgrading existing buildings to conserve resources and history.
ICC IEBC

International Mechanical Code
Establishes minimum regulations for mechanical systems using prescriptive and performance-related provisions.
ICC IMC

International Plumbing Code
The code provides comprehensive minimum regulations for plumbing facilities in terms of both performance and prescriptive objectives providing for the acceptance of new and innovative products, materials, and systems.
ICC IPC

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ICC IPC (LL)

International Plumbing Code Commentary
The IPC Commentary includes the full text of each section, table and figure in the code, followed immediately by the commentary applicable to that text. Discussions focus on the full meaning and implications of the code text and guidelines suggest the most effective method of application and the consequences of not adhering to the code. Illustrations are provided to aid understanding.
ICC IPC COMMENTARY

International Private Sewage Disposal Code
This companion to the IPC includes provisions for design, installation, and inspection of private sewage disposal systems, and provides flexibility in the development of safe and sanitary systems.
ICC IPSDC

International Electrical Code
The 2003 ICC Electrical Code contains administrative text necessary to administer and enforce the 2002 National Electrical Code ® and complies with electrical provisions contained in the other ICC International Codes.
ICC IEC

International Energy Conservation Code
Encourages energy conservation through efficiency in envelope design, mechanical systems, lighting systems, and the use of new materials and techniques.
ICC IECC

International Fire Code
Topics addressed include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, hazardous materials storage and use, and fire-safety requirements for new and existing buildings and premises.
ICC IFC

International Fuel Gas Code
Addresses the design and installation of fuel gas systems and gas-fired appliances through requirements that emphasize performance.
ICC IFGC

International Property Maintenance Code
Addresses maintenance requirements for the interior and exterior of structures, and space requirements for determining maximum occupancy. The IPMC also contains requirements for heating and plumbing in existing workplaces, hotels and residential occupancies, and minimum light and ventilation criteria.
ICC IPMC

International Urban-Wildland Interface Code
Contains provisions addressing fire spread, accessibility, defensible space, water supply, and more for buildings constructed near wildland areas.
ICC IUWIC

International Zoning Code
Contains uniform requirements for use districts and five zoning classifications, consistent zoning requirements that can be tailored to specific jurisdictional needs, and coordinated requirements and definitions related to the International Building Code (IBC).
ICC IZC

International Performance Code for Building and Facilities
Presents regulations based on outcome rather than prescription. It encourages new design methods by allowing a broader parameter for meeting the intent of the International Codes.
ICC PCBF

Complete Set of ICC Codes
Contains the complete set of the 14-ICC Code books in soft cover (IBC, IRC, IEBC, IMC, IPC, IPSDC, IEC, IECC, IFC, IFGC, IPMC, IUWIC, IZC, and PCBF).
ICC COMPLETE

Constructionary – Construccionario
The Constructionary is a unique pocket-size dictionary of up-to-date construction words and phrases in English-Spanish and Spanish-English. The Constructionary is the construction professional's on-the-job communication assistant -- bridging the communication gap between English and Spanish speakers to keep them working together successfully. A handy tool of more than 210 pages with over 1,000 construction terms and over 70 phrases including: phonetic pronunciation, helpful construction terms, useful on-the-job phrases, a tools section, and practical tables.
ICBO CONSTRUCTIONARY

International Organization for Standardization (ISO)

Building Construction Machinery and Equipment - Terms and Definitions
ISO 11375

Building Construction - Tolerances - Expression of Dimensional Accuracy - Principles and Terminology
ISO 1803

Fire-Resistance Tests - Elements of Building Construction - Part 1: General Requirements
ISO 834-1

Jordon ADA Compliance Manuals

State and city specific Architectural Barrier Removal and ADA Compliance Manuals from Jordan Publishing are clear, concise, comprehensive and complete reference books that state exact requirements to help with compliance to the Americans with Disabilities Act (ADA). Manuals include both Federal and State specific information, including new and enhanced drawing details. The Jordan Compliance Manuals are available in hardcopy and CD-ROM.

Arizona
JORDAN AZ ADA MANUAL

California
JORDAN CA ADA MANUAL

Florida
JORDAN FL ADA MANUAL

Illinois
JORDAN IL ADA MANUAL

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JORDAN MD ADA MANUAL

Massachusetts
JORDAN MA ADA MANUAL

Michigan
JORDAN MI ADA MANUAL

Minnesota
JORDAN MN ADA MANUAL

New Jersey
JORDAN NJ ADA MANUAL

New York City
JORDAN NYC ADA MANUAL

New York State
JORDAN NY ADA MANUAL

Ohio
JORDAN OH ADA MANUAL

Oregon
JORDAN OR ADA MANUAL

Pennsylvania
JORDAN PA ADA MANUAL

Texas
JORDAN TX ADA MANUAL

Virginia
JORDAN VA ADA MANUAL

Washington
JORDAN WA ADA MANUAL

Wisconsin
JORDAN WI ADA MANUAL

MEANS Publications

MEANS Assemblies Cost Data
MEANS ASSEMBLIES COST

MEANS Building Construction Cost Data
MEANS CONSTRUCTION

MEANS Construction Delays: Documenting Cases, Winning Claims, Recovering Cost
MEANS CONSTRUCTION DELAYS

MEANS Electrical Cost Data
MEANS ELECTRICAL COST

MEANS Electrical Estimating
MEANS ELECTRICAL ESTIMAT

MEANS Facilities Construction Cost Data
MEANS FACILITIES COST

MEANS Illustrated Construction Dictionary
MEANS ILLUSTRATED

MEANS Interior Cost Data - Partitions, Ceiling, Finishes, Floors and Furnishings
MEANS INTERIOR COST DATA

MEANS Light Commercial Cost Data
MEANS LIGHT COST DATA

MEANS Mechanical Cost Data
MEANS MECHANICAL COST

MEANS Plumbing Cost Data
MEANS PLUMBING COST DATA

MEANS Repair and Remodeling Cost Data Commercial/Residence
MEANS REPAIR & REMODELING

MEANS Site Work and Landscape Cost Data
MEANS SITE-LANDSCAPE COST

MEANS Square Foot Costs
MEANS SQUARE FOOT

NACE International (NACE)

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Complete set of NACE RPs, MRs and TMs
NACE BOOK OF STANDARDS

The Institute of Electrical & Electronics Engineers, Inc. (IEEE)

National Electrical Safety Code (NESC)
Please see page 66 for a complete description.
IEEE C2

National Fire Protection Association (NFPA)

National Electrical Code (NEC) Handbook
The NEC Handbook is the official "user guide" to the National Electrical Code. It includes extra facts and figures necessary in helping you interpret the new NEC. Provides expert commentary, examples, diagrams, and illustrations.
NFPA 70 HDBK

National Fire Protection Association (NFPA)

Installation of Sprinkler Systems
NFPA 13

Automatic Sprinkler System Handbook
NFPA 13HB

Automatic Sprinkler Systems Standard and Handbook Set
NFPA 13 SET

Installation of Sprinkler Systems in One and Two Family Dwellings and Manufactured Homes
NFPA 13D

Installation of Sprinkler Systems in Residential Occupancies up to Four Stories in Height
NFPA 13R

National Electrical Code (NEC)
Published by The National Fire Protection Association (NFPA), the NEC provides the most current and most complete safety criteria for all electrical installations.
NFPA 70
NFPA 70 (LL)
NFPA 70 CD

National Electrical Code (NEC) - Codigo Electrico Nacional
NFPA 70 SPANISH

National Electrical Code (NEC) Handbook
The NEC Handbook is the official "user guide" to the National Electrical Code. It includes extra facts and figures necessary in helping you interpret the new NEC. Provides expert commentary, examples, diagrams, and illustrations.
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National Electrical Code Handbook & NFPA 70 in Spanish
1999 revision
NFPA 70 SET SPANISH

National Fire Alarm Code
NFPA 72

National Fire Alarm Code Handbook
NFPA 72HB

National Fire Alarm Code and Handbook Set
NFPA 72 SET

Installation of Air Conditioning and Ventilating Systems
NFPA 90A

Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances
NFPA 211

Types of Building Construction
NFPA 220

Sheet Metal and Air Conditioning Contractors National Association (SMACNA)

Architectural Sheet Metal Manual
SMACNA 1013
SMACNA 1013 CD

HVAC Duct Construction Standards - Metals and Flexible
SMACNA 1481
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SMACNA MNL SET CD

Telecommunciations Industry Association (TIA)

Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications
The purpose of this standard is to enable the planning, design, and installation of telecommunications grounding and bonding systems within a building with or without prior knowledge of the telecommunications systems that will subsequently be installed. This standard also provides recommendations for grounding and bonding of customer owned towers and antennas. This telecommunications grounding and bonding infrastructure supports a multivendor, multiproduct environment as well as various system installation practices.
J-STD-607

TIA/EIA Telecommunications Building Wiring Standards Collection
Please see page for a complete description.
TIA/EIA WIRING CD

Network pricing available. Call for details.

Commercial Building Telecommunications Cabling Standards - Part 1: General Requirements
Specifies a generic telecommunications cabling system for commercial buildings that will support a multi-product, multi-vendor environment.
TIA/EIA-568-1

Commercial Building Telecommunications Cabling Standards - Part 2: Balanced Twisted-Pair Cabling Components
Specifies cabling components, transmission, system models, and the measurement procedures needed for verification of balanced twisted-pair cabling.
TIA/EIA-568-2

Optical Fiber Cabling Components Standard
Specifies the component and transmission requirements for an optical fiber cabling system (e.g., cable, connectors).
TIA/EIA-568-3

Commercial Building Telecommunications Cabling Standards Set
Includes: Part I: General Requirements, Part II: Balanced Twisted-Pair Cabling Components and Part III: Optical Fiber Cabling Components Standard.
TIA/EIA-568 SET
TIA/EIA-568 SET CD

Commercial Building Standard for Telecommunications Pathways and Spaces
This document encompasses telecommunications considerations both within and between buildings. The aspects covered are the pathways into which telecommunications media are placed, and the rooms and areas associated with the building used to terminate media and install telecommunications equipment.
TIA/EIA-569

Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
The purpose and intent of this document is to provide a uniform administration scheme that is independent of applications, which may change several times throughout the life of a building. This standard establishes guidelines for owners, end users, manufacturers, consultants, contractors, designers, installers, and facilities administrators involved in the administration of the telecommunications infrastructure or related administration system.
TIA/EIA-606

Underwriters Laboratories, Inc. (UL)

Heating and Cooling Equipment
UL 1995

Test for Surface Burning Characteristics of Building Materials
UL 723

Fire Dampers
UL 555

Ceiling Dampers
UL 555C

Smoke Dampers
UL 555S

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CONSTRUCTION INDUSTRY TRENDS

ASME International (ASME)

Dimensioning and Tolerancing - Includes Inch and Metric
This standard establishes uniform practices for stating and interpreting dimensioning, tolerancing, and related requirements for use on engineering drawings and in related documents. For a mathematical explanation of many of the principles in this standard, see ASME Y14.5.1m. Practices unique to architectural and civil engineering, land, welding symbology are not included.
ANSI Y14.5M

Engineering Drawing Practices
This standard establishes the essential requirements and reference documents applicable to the preparation and revision of engineering drawings and associated lists. In general terms of addressing the subject area of engineering drawing practices, this standard should be used in close conjunction with ASME Y14.24M, ASME Y14.34M, and ASME Y14.35M.
ASME Y14.100

ASME International (ASME)

Preferred Metric Limits and Fits
ANSI B4.2

ASME Y14 Drafting Manual Series of Standards
This concise set of engineering drawings and related documentation practices consists of 18 definitive standards, including the latest supplements. The ASME Y14 Series is a two-volume set and includes binders.
ASME Y14 SERIES
ASME Y14 SERIES CD

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See list below for the standards contained within the ASME Y14 Series.

Volume 1

Decimal Inch Drawing Sheet Size and Format
This standard defines decimal inch sheet sizes and formats for engineering drawings.
ANSI Y14.1

Metric Drawing Sheet Size and Format
This standard defines metric sheet sizes and formats for engineering drawings.
ANSI Y14.1M

Line Conventions and Lettering
This standard establishes the line and lettering practices for use in the preparation of engineering drawings. It includes the recognition of the requirements for photographic reduction and reproduction, including microfilm, as well as the conventional methods of reproduction.
ASME Y14.2M

Multi and Sectional View Drawings
This standard establishes the requirements for creating orthographic views for item description. Space geometry and space analysis and applications are included in the appendices for informational purposes.
ANSI Y14.3M

Pictorial Drawing
This standard establishes definitions for and illustrates the use of various kinds of three dimensional view pictorial mechanical drawings. It also addresses the kinds of pictorial views commonly used on engineering drawings. Methods of constructing the different kinds of pictorial drawings are beyond the scope of this standard. Methods are described in detail in engineering drawing textbooks.
ANSI Y14.4M

Dimensioning and Tolerancing - Includes Inch and Metric
This standard establishes uniform practices for stating and interpreting dimensioning, tolerancing, and related requirements for use on engineering drawings and in related documents. For a mathematical explanation of many of the principles in this standard, see ASME Y14.5.1m. Practices unique to architectural and civil engineering, land, welding symbology are not included.
ANSI Y14.5M

Mathematical Definition of Dimensioning and Tolerancing Principals
This standard presents a mathematical definition of geometrical dimensioning and tolerancing consistent with the principles and practices of ASME Y14.5m-1994.
ANSI Y14.5.1M

Screw Threads Representation
This standard establishes requirements for pictorial representation, specification, and dimensioning of screw threads on drawings; it is not concerned with standards for dimensional control of screw threads.
ASME Y14.6

Volume 2

Gear Drawing Standards - Part 1 for Spur, Helical, Double Helical and Rack
This standard sets forth methods to be followed for specifying drawing data for gears operating on axes which are parallel. It is the purpose of this standard to provide formats, nomenclature, and definitions for the following types of gears: Spur, Helical, Double-Helical, and Spur and Helical Racks. The minimum data for the various gear types are defined. Where additional data are required, methods for specifying these data are shown. Slight deviations for critical applications are recognized, provided general formats are maintained.
ASME Y14.7.1

Gear and Spline Drawing Standards Part 2 - Bevel and Hypoid Gears
This standard establishes methods to be followed in specifying data for gears with intersecting axes (bevel gears), and non-parallel, non-trisecting axes (hypoid gears). It also discusses the method of specifying matched sets on a gear drawing.
ANSI Y14.7.2

Casting and Forgings
This standard covers the definition of terms and features unique to casting and forging technologies with recommendations for their uniform description and inclusion on engineering drawings and related documents. Unless otherwise specified, any reference to features, parts, or processes shall be interpreted as applying to both castings and forgings. Castings and forgings are delineated as casting/forging throughout the standard.
ANSI Y14.8M

Mechanical Spring Representation
This standard establishes uniform methods for specifying end product data on drawings for mechanical springs. A mechanical spring is defined as an elastic body whose mechanical function is to store energy when deflected by a force and to return the equivalent amount of energy upon being release.
ASME Y14.13M

Types and Applications of Engineering Drawings
This standard defines the types of engineering drawings most frequently used to establish engineering requirements. It describes typical applications and minimum content requirements. Drawings for specialized engineering disciplines (e.g., marine, civil, construction, optics, etc.) are not included in this standard.
ASME Y14.24

Parts Lists, Data Lists, and Index Lists: Associated Lists
This standard establishes the minimum requirements for the preparation and revision of parts lists, data lists, and index lists. In addition, this standard presents certain options that may be incorporated into parts lists, data lists, index lists, application lists, indentured data lists, and wire lists at the discretion of the design activity.
ANSI Y14.34M

Revision of Engineering Drawings and Associated Documents
This standard defines the practices for revising drawings and associated documentation and establishes methods for identification and recording revisions. The revision practices of this standard apply to any form of original drawing and associated documentation.
ASME Y14.35M

Surface Texture Symbols
This standard establishes the method to designate controls for surface texture of solid materials. It includes methods for controlling roughness, waviness, and lay by providing a set of symbols for use on drawings, specifications, or other documents. This standard does not specify the means by which the surface texture is to be produced or measured to metric SI units.
ANSI Y14.36M

Abbreviations and Acronyms
The abbreviations and acronyms, hereinafter referred to as “abbreviations,” listed in this standard are used on engineering drawings and related documentation.
ASME Y14.38

Engineering Drawing Practices
This standard establishes the essential requirements and reference documents applicable to the preparation and revision of engineering drawings and associated lists. In general terms of addressing the subject area of engineering drawing practices, this standard should be used in close conjunction with ASME Y14.24M, ASME Y14.34M, and ASME Y14.35M.
ASME Y14.100

ASME Y14 Series and Drawing Requirements Manual on CD-ROM

Includes the complete Drawing Requirements Manual and the ASME Y14 Series on CD-ROM.

ASME Y14 Series and Drawing Requirements Manual on CD-ROM
The ASME Y14 Series and DRM 10th Edition on CD-ROM includes full-text searching capabilities, links, and the ability to search the ASME Y14 Series and the multiple sections of the DRM simultaneously.
DRM/ASME Y14 CD

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Association Connecting Electronics Industries (IPC)

Single-Sided Artwork
IPC-A-41

Double Sided Artwork
Includes 2 Drawings, IPC-100042, and IPC-100001.
IPC-A-42

Ten-Layer Multilayer Artwork
Includes IPC-100043 Film.
IPC-A-43 FILM KIT

Mass Lamination Artwork
Includes IPC-100044 Film.
IPC-A-44

Printed Board Drawings in Digital Form
IPC-D-351

ASTM International (ASTM)

Standard Guide for Selection of Scales for Metric Building Drawings
ASTM E 713

Practice for Security Engineering Symbols
ASTM F 967

Standard Practice for Piping System Drawing Symbols
ASTM F 1000

British Standards Institution (BSI)

Recommendations for Graphic Symbols and Abbreviations for Fire Protection Drawings
BS 1635

Construction Drawings - Designation Systems - Part 1: Buildings and Parts of Buildings
BS EN ISO 4157 P1

Construction Drawings - Designation Systems - Part 2: Room Names and Numbers
BS EN ISO 4157 P2

Construction Drawings - Designation Systems - Part 3: Room Identifiers
BS EN ISO 4157 P3

Technical Drawings - Screw Threads and Threaded Parts - Part 1: General Conventions
BS EN ISO 6410-1

Technical Drawings - Screw Threads and Threaded Parts - Part 2: Screw Thread Inserts
BS EN ISO 6410-2

Technical Drawings - Screw Threads and Threaded Parts - Part 3: Simplified Representation
BS EN ISO 6410-3

Construction Drawings - Simplified Representation of Demolition and Rebuilding
BS EN ISO 7518

Construction Drawings - Spaces for Drawing and for Text, and Title blocks on Drawing Sheets
BS EN ISO 9431

Construction Drawings - Landscape Drawing Practice
BS EN ISO 11091

Canadian Standards Association (CSA)

Technical Drawings - General Principles
CSA B78.1

Dimensioning and Tolerancing of Technical Drawings
CSA B78.2

Building Drawings
CSA B78.3

Computer-Aided Design Drafting (Buildings)
CSA B78.5

Deutsches Institut fur Normung, e.V. (DIN)

Terminology Associated with Technical Drawings
DIN 199 P1

Terms in Drawings and Parts Lists; Parts Lists
DIN 199 P2

Engineering Drawing Practice Dimensioning Concepts and General Principles
DIN 406 P10

Relationship Between Tolerances of Size, Form, and Parallelism; Envelope Requirement Without Individual Indication on the Drawing
DIN 7167

General Tolerances for Linear and Angular Dimensions and Geometrical Tolerances (Not to be used for New Designs)
See also ISO 2768-1 & -2 for New Designs.
DIN 7168

Safety of Machinery; Rules for Drafting and Presentation of Safety Standards
DIN EN 414

Welded, Brazed and Soldered Joints - Symbolic Representation on Drawings
DIN EN 22553

Engineering Drawings 1. DIN 5 Part 1 to DIN 6773 Part 5
DIN HDBK 2

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For the use in the preparation of engineering drawings for commercial products including access to military requirements that are in excess of commercial applications. The DRM 10th edition is a complete up-to-date compliance resource on how to prepare engineering drawings to meet the requirements of industry for commercial products while meeting the requirements of the Department of Defense (DoD) contracts. The DRM is also a valuable reference for engineers, designers, drafters, machinists, and quality control inspectors who need to understand drawing requirements and interpretations. The DRM 10th edition is in compliance with ASME Y14.100-2000 and MIL-DTL-31000B including Metric. Superceding ASME Y14.100M-1998, MIL-DTL-31000A Am1 & the cancellation of MIL-STD-100G. What's New in the 10th edition DRM: With the approval of ASME Y14.100-2000 including Appendices A thru E, it became apparent that the 9th edition of the DRM (1995) be updated to the 10th edition (2000). The DRM 10th edition reflects the recommendations since 1995 to the present for the mandatory use of commercial standards and specifications for DoD contracts and applications whenever practical. Progress made by DoD agencies to review all Government standards and specifications to determine if they can be replaced by Non-Government Standards or revised and re-identified as a Performance specification (PRF). Those standards retained as an exact design solution for Government requirements, are reidentified as a Detail specification (DTL) and require a waiver for their use - in compliance with the Acquisition Reform Policy Memo 98-2. Between 1995 and 2000, one hundred eighteen (118) specifications and standards listed in Section 1 of the DRM and related to the preparation of engineering drawings as applicable documents to ASME Y14.100-2000 and MIL-STD-100G have undergone changes including cancellation, being superseded, added as new, or revised. These specifications and standards are listed in the introduction of the DRM 10th and include their status. The DRM 10th edition also describes how the military requirements of the canceled MIL-STD-100G that now appear as Appendices A through E of ASME Y14.100-2000 are involved in part or in whole to satisfy a DoD contract.

Drawing Requirements Manual (DRM)
Single Volume Book with Illustrations, Diagrams, and Tables.
DRM
DRM (LL)
DRM CD
DRM CD NETWORK
DRM COMBO
DRM COMBO (LL)

Electronics Industries Association of Japan (EIAJ)

Recommended Practice on Standard for the Preparation of Outline Drawings of Semiconductor Packages
EIAJ ED 7300

General Rules for the Preparation of Outline Drawings of Integrated Circuits Small Outline Packages
EIAJ ED 7402-1

General Rules for the Preparation of Outline Drawings of Integrated Circuits Small Outline J-Lead Packages
EIAJ ED 7406

Recommended Practice for the Preparation of Outline Drawings of Semiconductor Devices (Discrete Semiconductor Devices)
EIAJ ED 7501

Global Engineering Documents®

Drawing Requirements Manual (DRM)
Single Volume Book with Illustrations, Diagrams and Tables
DRM

International Organization for Standardization (ISO)

Technical Drawings - Geometrical Tolerancing - Tolerancing of Form, Orientation, Location and Run-Out-Generalities Definitions, Symbols, Indications on Drawings
ISO 1101

Geometrical Product Specifications (GPS) - Indication of Surface Texture in Technical Product Documentation
ISO 1302

Technical Drawings - Geometrical Tolerancing - Datums and Datum-Systems for Geometrical Tolerances
ISO 5459

Accuracy (Trueness and Precision) of Measurement Methods and Results - Part 1: General Principles and Definitions
ISO 5725-1

Accuracy (Trueness and Precision) of Measurement Methods and Results - Part 2: Basic Method for the Determination of Repeatability and Reproducibility of a Standard Measurement Method
ISO 5725-2

Technical Drawings - Fundamental Tolerancing Principle
ISO 8015

Optics and Optical Instruments - Preparation of Drawings for Optical Elements and Systems - Part 1: General
ISO 10110-1

Optics and Optical Instruments - Preparation of Drawings for Optical Elements and Systems - Part 2: Material Imperfections - Stress Birefrigerence
ISO 10110-2

Technical Drawings - Edges of Undefined Shape - Vocabulary and Indications
ISO 13715

Technical Drawings - Volume 1: Technical Drawings in General - Mechanical Engineering Drawings - Construction Drawings
ISO HDBK TECH DRAWINGS V1

Japanese Standards Association (JSA)

Technical Drawings - Plotters - Vocabulary
JIS B 0025

Technical Drawings - Method of Indicating Surface Texture on Drawings
JIS B 0031

Technical Drawing - Dimensioning
JIS Z 8317

Technical Drawing - Tolerancing of Linear and Angular Dimensions
JIS Z 8318

Military and Government Documents

Technical Data Packages
MIL-DTL-31000

Standardized Military Drawings
MIL-HDBK-780

Policy and Procedures for Project Drawing and Specifications Preparation
MIL-HDBK-1006/1

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Complete Set of MS/AN/AND Standard Drawings with Index
The MS Drawings Set is the single most useful source of standards drawings information for those who design, construct, procure, or maintain equipment for military applications. The MS Set is a collection of nearly 7,000 current U.S. Military Standard (MS), Air Force-Navy Aeronautical Standard (AN), and Air Force-Navy Design Standard (AND) drawings. The MS Set covers every aspect of hardware, components and fittings in a multitude of applications.
MS SET
MS SET RENEWAL

MS Drawings Index - Index to AN, AND and MS Drawings Standards
Organized into Inch and Metric sections, each containing numeric listings by document number and alphabetic listings by title. Includes number, title, revision level, date, and reaffirmation date if applicable. Updated Quarterly.
MS INDEX

Military Standard (MS) Drawings are available for individual purchase.

National Aerospace Standards (NAS)

An extensive collection that provides nearly 3,000 aerospace standards for components, design and process specifications aircraft, spacecraft, major weapon systems and all types of ground and airborne electronic systems. The NAS Set contains procurement documents for parts and components of high technology systems including fasteners, high-pressure hoses, fittings, high-density electrical connectors, and bearings. Major components, design standards, and process specifications are defined right down to the finished product. Heavily illustrated and includes parts numbers.

Complete Set of NAS Standards
Eleven Volume Set, includes NAS Index, and includes update service for first year.
NAS SET

Renewal for NAS Set
Update service after first year.
NAS SET RENEWAL

Index to National Aerospace Standards
Organized into Inch and Metric sections, each section contains numeric listings by document number and alphabetic listings by title. Document listings include number, title, revision level, date, and reaffirmation date if applicable.
NAS INDEX

Complete Set of Metric Standards
Contains NA, NAM & DS Documents.
NAS METRIC SET

Renewal for NAS Metric Set
Update service after first year.
NAS METRIC SET RENEWAL

NAS Standards are available for individual purchase.

The Illuminating Engineering Society of North America (IESNA)

Application of Luminaire Symbols on Lighting Design Drawings
IESNA DG 3

Interpreting Engineering Drawings
IESNA PB 112

US Pro Trident Research Center

Initial Graphics Exchange Specifications
IGES
IGES CD

IGES Recommended Practice Guide
IGES RECOMMENDED

Acoustical Society of America (ASA)

Acoustical Terminology

This standard provides definitions for a wide variety of terms, abbreviations, and letter symbols used in acoustics and electroacoustics. Terms of general use in all branches of acoustics are defined, as well as many terms of special use for architectural acoustics, acoustical instruments, mechanical vibration and shock, physiological and psychological acoustics, underwater sound, sonics and ultrasonics, and music.

ANSI S1.1

Sound Level Meters

This standard includes an optional impulse exponential-time averaging characteristic, inclusion of an optional peak characteristics, more rigorous definition of the dynamic characteristics for the Fast and Slow exponential-time-averaging, increase in the crest factor requirement to ten for type 1 instruments, specification of a type 0 laboratory instrument with generally smaller tolerance limits than those previously specified for type 1, and deletion of the type 3 survey instrument.

ANSI S1.4

Octave Band and Fractional-Octave Band Analog and Digital Filters

This standard provides performance requirements for fractional-octave-band bandpass filters, including, in particular, octave-band and one-third-octave-band filters. Basic requirements are given by equations with selected empirical constants to establish limits on the required performance. The requirements are applicable to passive or active analog filters that operate on continuous-time signals, to analog and digital filters that operate on discrete-time signals and to fractional-octave-band analyses synthesized from narrow-band spectral components.

ANSI S1.11

Methods for the Measurement of Sound Pressure Levels in Air

This standard specifies requirements and describes procedures for the measurement of sound levels in air at a single point in space. These requirements and procedures apply primarily to measurements performed indoors but may be utilized in outdoor measurements under specified conditions.

ANSI S1.13

Method for Measuring the Intelligibility of Speech Over Communication Systems

The standard provides three alternative sets of lists of English words to be spoken by trained talkers over the speech communication system to be evaluated. The selection of the particular set of word lists depends upon the purpose and constraints of the test situation. Trained listeners record the words they hear. The fraction of the words they identify correctly is the measure of the intelligibility of speech over the system.

ANSI S3.2

Acoustics - Determination of Sound Power Levels of Noise Sources Using Sound Pressure - Precision Method for Reverberation Rooms

This standard specifies a direct method and a comparison method for determining the sound power level that would be produced by a source operating in an environment at standard meteorological conditions.

ANSI S12.51

Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools

This Standard provides acoustical performance criteria, design requirements, and design guidelines for new school classrooms and other learning spaces. The standard may be applied when practicable to the major renovation of existing classrooms. These criteria, requirements, and guidelines are keyed to the acoustical qualities needed to achieve a high degree of speech intelligibility in learning spaces. Design guidelines in informative annexes are intended to aid in conforming to the performance and design requirements, but do not guarantee conformance. Test procedures are provided in an annex when conformance to this standard is to be verified.

ANSI S12.60

Aeronautical Radio Incorporated (ARINC)

Air Transport Equipment Cases and Racking

This original "ATR" packaging standard provides a system of modularized equipment dimensions used in a wide variety of avionics installations. Connector standards, mating and holdown techniques are included.

ARINC 404A

Air Transport Avionics Equipment Interface)

ARINC 600 is a mechanical packaging standard that is used with the ARINC 700-series of digital avionics equipment. It provides mechanical, electrical, and environmental interfaces between LRUs and the racks or cabinets in which they are installed. Provides connector shell definition, connector insert layout and mounting dimensions.

ARINC 600

Traffic Alert and Collision Avoidance System (TCAS)

This standard defines as TCAS system capable of calculating the range, altitude and bearing of other aircraft equipped with Mode S transponders. The system monitors the trajectory of these aircraft for the purpose of determining if any of them constitute a potential collision hazard.

ARINC 735

Association Connecting Electronics Industries (IPC)

IPC
ASSOCIATION CONNECTING ELECTRONICS INDUSTRIES

Electronics Assembly

Acceptability of Electronic Assemblies

Includes 200 new illustrations. Provides visual acceptance requirements for electronic assemblies and addresses materials and acceptability criteria for producing quality soldered interconnections and assemblies.
IPC-A-610
IPC-A-610 CD

Qualification and Performance of Electrical Insulating Compound for Printed Wiring Assemblies

This is the industry standard for qualification and quality conformance of conformal coating. Its intent is to show how to obtain maximum information with minimum test redundancy. Includes requirements and evaluations of material properties using standardized test vehicles. Revision B updates include sample reports to document qualification, retention and conformance inspection.
IPC-CC-830

IPC Test Methods Manual

IPC-TM-650

Requirements & Acceptance for Cable & Wire Harness Assembliess

IPC/WHMA-A-620 is the first industry-consensus standard for Requirements and Acceptance of Cable and Wire Harness Assemblies. IPC and the Wire Harness Manufacturers Association teamed to develop this easy to understand standard. With over 500 full-color pictures and illustrations, this standard finally satisfies a long-needed industry requirement. Included in the 18 chapters are criteria for wire prep, soldering to terminals, crimping of stamped and formed contacts and machined contacts, insulation displacement connectors, ultrasonic welding, splicing, connectors, molding, marking, coax/twinax cables, wrapping/lacing, shielding, assembly and wire-wrap terminations.
IPC/WHMA-A-620

Rework of Electronic Assemblies

Covers procedures for reworking electronic assemblies, either as part of the manufacturing process or after the assemblies have been in the field. Describes the procedural requirements, tools, materials and methods to be used in removing and replacing conformal coatings, surface mount and through-hole components.
IPC-7711

Repair and Modification of Printed Boards and Electronic Assemblies

Covers procedures for modifying, reworking and repairing printed boards and printed board assemblies. Prescribes the procedural requirements as well as tools, materials and methods to be used in removing and replacing conformal coatings and solder resist material.
IPC-7721

Performance Test Methods and Qualification Requirements for Surface Mount Solder Attachments

Provides specific test methods to evaluate the performance and reliability of surface mount solder attachments of electronic assemblies. Establishes levels of performance and reliability of the solder attachments of surface mount devices to rigid, flexible and rigid-flex circuit structures. When used with IPC-SM-785, it provides an understanding of the physics of SMT solder joint failure and an approximate means of relating performance tests results to the reliability of solder attachments in their use environments
IPC-9701

Solderability Test Methods for Printed Wiring Boards

IPC/EIA J-STD-003A provides industry-recommended test methods, defect definitions and illustrations for suppliers and users to assess the solderability of printed board surface conductors, lands and plated-through holes. This revision includes a significant change in the type of flux required to be used for solderability testing. Test methods covered include edge dip, rotary dip, solder float, wave solder and wetting balance. Produced by IPC and EIA.
J-STD-003

Requirements for Soldering Fluxes

Covers requirements for qualification and classification of rosin, resin, organic and inorganic fluxes according to the activity level and halide content of the fluxes. Solder fluxes, flux-containing materials and low residue fluxes for no-clean process are addressed. Supersedes QQ-S-571 and MIL-F-14256. (Revision A is near release. Free status notification is available through the IPC New Releases E-mail service.) Developed by IPC and EIA.
J-STD-004

Requirements for Soldering Pastes

Lists requirements for qualification and characterization of solder paste. Test methods and criteria for metal content, viscosity, slump, solder ball, tack and wetting of solder pastes are included. Supersedes QQ-S-571. Developed by IPC and EIA
J-STD-005

Requirements for Electronic Grade Solder Alloys and Fluxed and Non-Fluxed Solid Solders for Electronic Soldering Applications

This standard prescribes the nomenclature, requirements and test methods for electronic grade solder alloys; for fluxed and non-fluxed bar, ribbon, and powder solders, for electronic soldering applications; and for "special" electronic grade solders. The most prominent changes introduced by Revision A are a new alloy nomenclature system and definition of "lead free." Supersedes QQ-S-571 and J-STD-006 with Amendment 1. Developed by IPC and EIA.
J-STD-006

CIrcuit Board Fabrication

Acceptability of Printed Wiring Boards

Contains visual illustrations of preferred, acceptable, and rejectable conditions for: plated through holes; surface plating; solder coating; base materials, etching; conductors; mechanical processes; flexible and multilayer boards; bow/twist; flat cable; and other conditions in printed wiring fabrication.
IPC-A-600
IPC-A-600 CD

Specifications for Base Materials for Rigid and Multilayer Printed Boards

Covers the requirements for base materials (laminate and prepreg) to be used primarily for rigid or multilayer printed boards for electrical and electronic circuits.

IPC-4101
IPC-4101 CD

Qualification and Performance Specification for Rigid Printed Boards – Includes Amend 1

This specification covers qualification and performance of rigid printed boards, including single-sided, double-sided, with or without plated-through holes, multilayer with or without blind/buried vias and metal core boards. Addresses final finish and surface plating coating requirements, conductors, holes/vias, as well as electrical, mechanical and environmental requirements. Revision A provides updated requirements in areas such as solder resist, plating and coating of void and minimum dielectric spacing. Amendment 1 includes updated plating requirements for electrodeposited copper and metal core printed boards. For use with IPC-6011.

IPC-6012

Qualification and Performance Specification for Rigid Printed Boards

This specification covers qualification and performance of rigid printed boards, including single-sided, double-sided, with or without plated-through holes, multilayer with or without blind/buried vias and metal core boards. Addresses final finish and surface plating coating requirements, conductors, holes/vias, as well as electrical, mechanical and environmental requirements. Revision A provides updated requirements in areas such as solder resist, plating and coating of void and minimum dielectric spacing.

IPC-6012
IPC-6012 CD

Generic Performance Specification for Printed Boards

This specification establishes the general requirements and responsibilities for suppliers and users of printed boards. Serving as the foundation for the IPC-6010 Board Performance Documents series, it describes quality and reliability assurance requirements that must be met.

IPC-6011
IPC-6011 CD

Design

Generic Standard on PWB Design

IPC-2221 is the foundation document for the rest of the documents in the IPC-2220 series. Establishes the generic requirements for the design of organic printed boards and other forms of component mounting or interconnecting structures, whether single-sided, double-sided or multilayer. Materials may be homogeneous, reinforced, or used in combination with inorganic materials.

IPC-2221
IPC-2221 CD

Sectional Standard On Rigid PWB Design

Used in conjunction with IPC-2221A, IPC-2222 establishes the specific requirements for the design of rigid organic printed boards and other forms of component mounting and interconnecting structures. This standard applies to single-sided, double-sided or multi-layered boards. Key concepts in this document are: rigid laminate properties, designer/end user materials section map, and scoring parameters.

IPC-2222

Sectional Design Standard for Flexible Printed Boards

Used in conjunction with IPC-2221A, IPC-2223 establishes the requirements for design of single-sided, double-sided, multilayer, or rigid-flex flexible circuits. The document provides the user with updated materials consideration, minimum bend radius, differential lengths and new sections on board configurations.

IPC-2223

Printed Board Dimensions and Tolerances

The definitive standard on printed board dimensioning and tolerancing is finally here! IPC-2615 comprehensively covers dimensioning and tolerancing of electronic packaging and is consistent with other IPC printed board standards such as IPC-6012A and IPC-2221A. The document includes fundamental dimensioning and tolerancing rules, positional, profile, orientation and form tolerances and detailed geometric symbology. This new standard encompasses over 100 new and revised illustrations. Invaluable to the PWB designer, this document will help manufacturers and board purchasers achieve the most manufacturable board designs.

IPC-2615

Surface Mount Design and Land Pattern Standard

Get up-to-date land pattern recommendations for ball grid array packages with this latest printing of the popular IPC-SM-782A standard. The document covers land patterns for all types of passive and active components, including resistors, capacitors, MELFs, SOTs, SOPs, SOICs, TSOPs, QFPs, LCCS, PLCCS, and most recently, BGAs. Also included are EIA/JEDEC registered components, land pattern guidelines for wave or reflow soldering, a sophisticated dimensioning system, via location guidelines and V-groove scoring.

IPC-SM-782

Audio Engineering Society (AES)

AES Standard Method for Digital Audio Engineering - Measurement of Digital Audio Equipment

This standard provides methods for specifying and verifying the performance of digital audio equipment. Many tests are substantially identical to those used when testing analog equipment. However, because of the unique requirements of digital audio equipment and the effects of its imperfections, additional tests are necessary.

AES17

Audio Engineering Society (AES)

AES Standards are of interest to record companies, recording studios, television studios, and sound reinforcement companies.

AES Information Document for Digital Audio Engineering - Guidelines for the use of the AES 3 Interface

This document provides guidelines for the use of AES3, AES Recommended Practice for Digital Audio Engineering -- Serial transmission format for two-channel linearly represented digital audio data, together with AES5, AES Recommended Practice For professional digital audio applications employing pulse-code modulation -- Preferred sampling frequencies, AES11, AES Recommended Practice for Digital Audio Engineering -- Synchronization of digital audio equipment in studio operations, and AES18, AES Recommended Practice for Digital Audio Engineering -- Format for the user data channel of the AES digital audio interface.

AES-2ID

AES Recommended Practice for Digital Audio Engineering - Serial Transmission Format for Two-Channel Linearly Represented Digital Audio Data

The format provides for the serial digital transmission of two channels of periodically sampled and uniformly quantized audio signals on a single shielded twisted wire pair. The transmission rate is such that samples of audio data, one from each channel, are transmitted in time division multiplex in one sample period. Provision is made for the transmission of both user and interface related data as well as of timing related data, which may be used for editing and other purposes. It is expected that the format will be used to convey audio data that have been sampled at any of the sampling frequencies recognized by the AES5.

AES3

AES Information Document for Digital Audio Engineering Transmission of AES 3 Formatted Data by Unbalanced Coaxial Cable

This document contains information regarding cables, cable equalizers, and receiver circuits including adaptors to or from standard AES3 equipment and cabling where it is required to transmit AES3 formatted signals over long distances (up to 1,000 m), or in a video installation using analog video distribution equipment. It is not intended to be an alternative electrical specification to AES3.

AES-3ID

AES Information Document for Digital Audio - Personal Computer Audio Quality Measurements

This document focuses on the measurement of audio quality specifications in a PC environment. Each specification listed has a definition and an example measurement technique. Also included is a detailed description of example test setups to measure each specification.

AES-6ID

AES Recommended Practice for Digital Audio Engineering - Serial Multi-Channel Audio Digital Interface (MADI)

This standard describes the data organization for a multi-channel-audio digital interface. It includes a bit level description, features in common with the AES3-1985 two channel format, and the data rates required for its utilization.

AES10

AES Information Document for Digital Audio Engineering - Engineering Guidelines for the Multi-Channel - Audio Digital Interface (MADI)

This document provides guidance for areas of application of the MADI standard (AES10) that might be unclear. It is not intended to replace AES10, but to supplement it in those areas that are not suitable for definition in a standards document.

AES-10ID

AES Standard Method for Digital Audio Engineering - Measurement of Digital Audio Equipment

This standard provides methods for specifying and verifying the performance of digital audio equipment. Many tests are substantially identical to those used when testing analog equipment. However, because of the unique requirements of digital audio equipment and the effects of its imperfections, additional tests are necessary.

AES17

British Standards Institution (BSI)

Specification for Intrinsically Safe Electrical Systems 'i'

Specific requirements for construction and testing of intrinsically safe systems intended for use, as a whole or in part, in potentially explosive atmospheres.

BS 5501 P9

Electrical Apparatus for Potentially Explosive Atmospheres - General Requirements

Requirements for construction, testing and marking of apparatus, Ex cable entries, and Ex components intended for use in potentially explosive atmospheres of gas, vapour and mist.

BS EN 50014

Electrical Apparatus for Potentially Explosive Atmospheres - Flameproof Enclosures "D"

BS EN 50018

Electrical Apparatus for Potentially Explosive Atmospheres - Intrinsic Safety "I"

BS EN 50020

Specification for Electrical Apparatus with Type of Protection "N"

BS EN 50021

Electronic Equipment for use in Power Installations

BS EN 50178

Safety of Household and Similar Electrical Appliances - Part 1: General Requirements

BS EN 60335-1

Specification of Protection by Enclosures (IP Code)

BS EN 60529

Information Technology Equipment - Safety - Part 1: General Requirements

BS EN 60950-1

Consumer Electronics Association (CEA)

Recommended Practice for Line 21 Data Service

Serves as a technical guide for those providing encoding equipment and/or decoding equipment to produce material with encoded data embedded in Line 21 of the vertical blanking interval of the NTSC video signal. It is also a usage guide for those who will produce material using such equipment. Revision incorporates content advisory.
CEA-608

Consumer Electronics Association (CEA)

EIA-708-B Implementation Guidance

This bulletin compliments EIA-708-B, Digital Television Closed Captioning, providing additional guidance for those implementing EIA-708-B. EIA/CEA-CEB 10 provides recommendations concerning DTVCC inplementation that are intended to ensure consistent encoder and decoder operations, and is intended to be a technical guide for DTVCC encoding and/or decoding equipment.
CEA CEB 10

NTSC/ATSC Loudness Matching

This bulletin provides guidance on maintaining uniform audio loudness between existing NTSC audio services and DTV audio services while preserving the dynamic range delivery capability of the DTV service. This bulletin addresses optimal output specifications, gain structure and capability of consumer broadcast products to match loudness from the viewer perspective.
CEA-CEB-11

Testing and Measurement Methods for Audio Amplifiers

Establishes methods to specify performance characteristics under both dynamic and static conditions for audio amplifiers.
EIA/CEA-490

Recommended Practice for Line 21 Data Service

Serves as a technical guide for those providing encoding equipment and/or decoding equipment to produce material with encoded data embedded in Line 21 of the vertical blanking interval of the NTSC video signal. It is also a usage guide for those who will produce material using such equipment. Revision incorporates content advisory.
CEA-608

Digital Television (DTV) Closed Captioning

This document is intended as a definition of DTV Closed Captioning (DTVCC) and provides specifications and/or guidelines for caption service providers, DTVCC decoder and encoder manufacturers, DTV receiver manufacturers, and DTV signal processing equipment manufacturers.
CEA-708

Mobile Electronics Wiring Designations for Audio, and Vehicle Security/Convenience

This standard defines the terms, abbreviations, and definitions used in the sales and installation of vehicle aftermarket audio and security equipment. The standard adds continuity to mobile electronics installation information, enables easier data collection, and ensures consistency of information to installers.
CEA-803

A DTV Profile for Uncompressed High Speed Digital Interfaces

This standard defines video timing requirements, discovery structures, and a data transfer structure (InfoPacket) that is used for building uncompressed, baseband, digital interfaces on digital televisions (DTV) or DTV Monitors.
CEA-861

Antenna Control Interface

This standard describes an antenna control interface for receiving terrestrial transmissions. The primary use is to facilitate television reception. The receiver controls the antenna apparatus to optimize the signal automatically for best reception by adjusting its configuration. This standard allows any receiver to operate with any antenna, regardless of manufacturer. This standard defines the data algorithms used, connection standards, and other requirements. The antenna configuration is neither specified nor implied, leaving certain antenna design considerations to the manufacturer.
CEA-909

CEBus®

Introduction to the CEBus Standard

The EIA-600 Specification covers the overall topology of the EIA-600 network and the detailed topology for each individual medium used; the electrical and physical specifications for the media usable by EIA-600; the physical interface from a device to the medium and the signaling method specifications to be used on the medium; the protocol to be used for network access and the description of the control message format; a command language that allows all devices to communicate a common set of functions to be performed. Aspects of the overall EIA-600 network that are not addressed in this specification are operation and maintenance of the network. This standard establishes a minimal set of rules for compliance. It does not rule out extended services that may be provided, as long as the rules of this standard are adhered to within the system. It is, in fact, the intention of the standards to permit extended services (defined by users) to exist.
CEA-600.10

Power Line Physical Layer and Medium Specification

This document is the preliminary specification for the CEBus Power Line (PL) Physical Layer and Media portion of the Physical Layer and Media Specifications of EIA-600. Its purpose is to present the information necessary for the development of a PL physical network and devices to communicate and share information over the network. This is one of a series of documents covering the various media that comprise the CEBus standard.
CEA-600.31

Twisted Pair Physical Layer & Medium Specification

This document is the specification for the CEBus Twisted Pair (TP) Physical Layer and Medium. Its purpose is to present all the information necessary for the development of a TP physical network and devices to communicate and share information over that network in an orderly manner. This is one of a series of documents covering the various media that comprise the CEBus standard.
CEA-600.32

Coax Cable Physical Layer & Medium Specification
This document is the preliminary specification for the CEBus Coax (CX) Physical Layer and Medium. Its purpose is to present all the information necessary for the development of a CX physical network and devices to communicate and share information over that network in an orderly manner. This is one of a series of documents covering the various media that comprise the CEBus standard.
CEA-600.33

IR Physical Layer & Medium Specification
This document is a preliminary specification for the CEBus Infrared (IR) Physical Layer and Medium portion of the Physical Layer and Medium specifications of EIA-600. Its purpose is to present all the information necessary for the development of a IR physical network and devices to communicate and share information over that network to and from IR and other CEBus media in an orderly manner. This is one of a series of documents covering the various media that comprise the CEBus standard.
CEA-600.34

RF Physical Layer & Medium Specification
This document is the preliminary specification for the CEBus Radio Frequency (RF) Physical Layer and Medium portion of the Physical Layer and Medium specifications of EIA-600. Its purpose is to present all of the information necessary for the development of a RF physical layer for the CEBus device. This is one of a series of documents covering various media that comprise the CEBus standard.
CEA-600.35

Symbol-Encoding Sublayer
This document describes the portion of the Node Physical Layer that interfaces to the Medium Access Control (MAC) Sublayer and to Layer System Management (LSM). This sublayer is called the Symbol Encoding (SE) Sublayer.
CEA-600.37

Power Line/Radio Frequency Symbol Encoding Sublayer
This document describes the portion of the Power Line or RF Physical Layer that interfaces to the Medium Access Control (MAC) Sublayer and to Layer System Management (LSM). This sublayer is called the Power Line/RF Symbol Encoding (PL/RF SE) Sublayer.
CEA-600.38

Description of the Data Link Layer
This document provides a prose description of the Data Link Layer Design for the CEBus Network. The intent of this document is to be descriptive, rather than provide a formal specification, and contains a discussion of the Data Link Layer interfaces to the Network Layer and Physical Layer, as well as a functional description of the Data Link Layer.
CEA-600.41

Node Medium Access Control Sublayer
This part of the CEBus standard is a technical specification for the services and protocol for the Node Medium Access Control Sublayer.
CEA-600.42

Node Logical Link Control Sublayer
This part of the CEBus standard is a technical specification for the services and protocol for the Node Logical Link Control Sublayer.
CEA-600.43

Node Network Layer Specification
This document is the CEBus Node Network Layer part of EIA-600.
CEA-600.45

Node Application Layer Specification
This document is the CEBus Node Application Network Layer part of EIA-600.
CEA-600.46

Common Application Language (CAL) Specification
This document describes the basic framework of CAL. It is intended as an introduction to CAL operation and syntax that stresses the object-oriented aspects of CAL. It is believed that the object-oriented methodology offers the best means of understanding the complex interaction between devices, controls, and controllers present in the CEBus environment.
CEA-600.81

CAL Context Description
This document describes the contexts, or main subsystems within a device, supported by the Common Application Language (CAL).
CEA-600.82

Introduction to EIA-600 Conformance Specification
This standard is concerned with conformance of an implementation to the associated protocol specifications contained in EIA-600. A dual audience is expected for this standard. The first is laboratories that may be interested in acting as conformance testing agencies. Such agencies are tasked with converting these requirements into a hardware/software test system. The second audience is the set of designers of EIA-600 compatible products. Any designer of compatible products should understand the importance of the tests described in this standard, as they relate to implementing EIA-600. The second group should read this standard while considering whether its hardware and/or software implementation is likely to pass the stated tests.
CEA-633.10

Power Line Physical Layer Conformance Specification
This portion of the conformance standard specifies tests to determine conformance of a Node's Power Line (PL) PL Physical Layer to IS-60. Part one of this standard provides an overview of the conformance philosophy. The reader is urged to review that material before attempting to use the details provided in this part.
CEA-633.31

Twisted Pair Physical Layer Conformance
This standard specifies tests to determine conformance of a device's Twisted Pair Physical Layer to EIA-600.
CEA-633.32

Infrared Physical Layer Conformance
This standard specifies tests to determine conformance of a Node's IR Physical Layer to EIA-600.
CEA-633.34

Symbol Encoding Sublayer Physical Layer Conformance
This standard specifies tests to determine conformance of a Node's Symbol Encoding Sublayer to EIA-600.
CEA-633.37

PL and RF Symbol Encoding Physical Layer Conformance
This standard specifies tests to determine conformance of a Node's Power Line or RF Symbol Encoding Sublayer to EIA-600.
CEA-633.38

Node Data Link Layer Conformance
CEA-633.42

Node Application Layer Conformance Specification
This portion of the conformance standard specifies tests to determine conformance of a Node's Application Layer to EIA-600.
CEA-633.46

CAL Conformance Specification
This portion of the conformance standard specifies tests to determine conformance of a Node's CAL to EIA-600.81. Part one of this standard provides an overview of the conformance philosophy. The reader is urged to review that material before attempting to use the details provided in this part.
CEA-633.81

Generic Common Application Language (Generic CAL) Specification
This document describes the basic framework of Generic CAL. It is intended as an introduction to Generic CAL operation and syntax that stresses the object-oriented aspects of Generic CAL. It is believed that the object-oriented methodology offers the best means of understanding the complex interaction between devices, controls, and controllers present in a Generic Network environment.
CEA-721.1

Generic CAL Context Description
This document describes the contexts, or main subsystems within a device, supported by the Generic Common Application.
CEA-721.2

Node Application Layer Specification
This Application Layer consists of four main elements. The application Process is the interface to the Application Layer. Services are provided by the Generic Common Application Language (Generic CAL) Element to the User Element of the Application Process. Generic CAL is the language framework through which Resource Allocation and Control functions are executed. The Message Transfer Element provides services to the Generic CAL Element. The Message Transfer Element interfaces to the lower layers of the Generic Network either directly or through the Association Control Element. The lower layers are representative of some home automation networks. Additional OSI layers may be included. An adaptation layer may be required between the Generic CAL Application Layer and the Generic Network lower layers.
CEA-721.3

Generic Common Application Language Quality of Service
This specification for Generic CAL consists of an Application Layer containing a command language and a Message Transfer Service Element. The specifications of the lower OSI layers are not within the scope of this standard. However, the services provided by the lower layers affect the performance and composition of messages issued from the Application Layer. These lower layer service options are collectively called the Quality-of-Service (QOS) available from the communications protocol. This portion of EIA-721 standard describes the lower layer QOS options that may impact the Application Layer. Recommended capabilities are specified. Also, a mechanism to convey these options to the Generic CAL Application Layer using Layer System Management functions is presented.
CEA-721.4

CEBus-EIB Router Communications Protocol-Description of the CEBus-EIB Router
This document describes the operation of a CEBus-EIB Router. This document is not intended to define how a router should operate, but to provide an overview of the operation and the coordination of various router elements.
CEA-776.1

CEBus-EIB Router Communications Protocol - CEBus-EIB Router Medium Access Control Sublayer
The CEBus-EIB Router Medium Control (MAC) Sublayer is almost identical to the CEBus or EIB Node MAC Sublayer corresponding to the "CEBus Side" or the Router. The differences are in the way the Router does address matching on a received packet and on the information exchanged in some of the service primitives. Rather than copy the Node MAC specification here and make minor changes, the Router MAC is specified by exception to the Node MAC for both the CEBus and EIB Specifications.
CEA-776.2

CEBus-EIB Router Communications Protocol - CEBus-EIB Router Logical Link Control Sublayer
This section specifies the CEBus-EIB Router Logical Link Control Sublayer interfaces to the Router Network Layer and to the Layer System Management. The interfaces are described in terms of service primitives, which are abstract interfaces across a layer boundary. A service primitive represents an exchange of information into or out of a layer. Although service primitives are defined using a format similar to that of programming language procedure calls, no implementation
CEA-776.3

CEBus-EIB Router Communications Protocol - CEBus-EIB Router Network Layer
The CEBus-EIB Router Network Layer is conceptually divided into several elements, each performing distinct well-defined services. Each element may be thought of as an independent process that communicates with the other elements and protocol layers through specified interfaces.
CEA-776.4

CEBus-EIB Router Communications Protocol - The EIB Communications Protocol
EIB is a control system for related applications in homes and buildings. The EIB system offers standardized basic and system components, e.g., Bus Coupling Units (BCU), Power Supply Units (PSU), Bus Interface Modules (BIM), Routers and RS-232 data interfaces. EIB offers the capability of constructing devices in a modular form using system devices like BCU or BIM that support communications-specific functions. A standardized interface called Physical External Interface (PEI) reduces the expense of developing EIB devices and allows them to be exchanged.
CEA-776.5

XML Encoding of Generic Common Application Language
This standard specifies the encoding of Generic Common Application Language (CAL) into XML. It is based on ANSI/EIA-721 and EIA-851.
CEA-844

EIA Home Automation System (CEBus)
CEA CEBUS SET

Digital Television Interfaces

National Renewable Security Standard (NRSS)
NRSS provides two physical designs. Part A defines a removable and renewable security element form factor that is an extension of the ISO-7816 standard. Part B defines a removable and renewable security element based on the PCMCIA form factor. The common attributes allow either an NRSS-A or NRSS-B device to provide security for applications involving pay and subscription cable or satellite television services, telephone, and all forms of electronic commerce.
CEA-679

Analog 525 Line Component Video Interface - Three Channels

This standard defines the physical characteristics of an interface and the parameters of the signals carried across the interface, using three parallel channels for the interconnection of equipment operating with analog component video signals. This standard includes specifications for two scanning structures: 1H - having 525 lines, 59.94 fields/second, 2:1 interlaced, and a horizontal scanning rate of 15.734 kHz; and 2H - for doubled scanned interfaces having 525 lines, 59.94 frames/second, progressively scanned, and having a horizontal scanning rate of 31.47 kHz. Both interfaces shall be capable of either 4:3 or 16:9 aspect ratios.

CEA-770.1

Standard Definition TV Analog Component Video Interface

This standard defines the physical characteristics of an interface and the parameters of the signals carried across that interface, using three parallel channels for the interconnection of equipment operating with analog component video signals. The standard includes specifications for: (1) 480i video format defined by 480 active lines, 525 total lines, 2:1 interlaced at 59.94 or 60 fields/second; and, (2) 480p video format defined by 480 active lines, 525 total lines, progressively scanned at 59.94 or 60 frames/second. Both video formats shall be capable of either 4:3 or 16:9 aspect ratios.

CEA-770.2

High Definition TV Analog Component Video Interface

This standard defines two raster-scanning systems for the representation of stationary or moving two-dimensional images sampled temporally at a constant frame rate. The first image format specified is 1920 x 1080 samples (pixels) inside a total raster of 1125 lines. The second image format specified is 1280 x 720 samples (pixels) inside a total raster of 750 lines. Both image formats shall have an aspect ratio of 16:9

CEA-770.3

Analog Video Interface Set

CEA-770 SET

DTV 1394 Interface Specification

This standard defines a specification for a baseband digital interface to a DTV using the IEEE-1394 bus and provides a level of functionality that is similar to the analog system. It is designed to enable interoperability between a DTV compliant with this standard and various types of consumer digital audio/video sources including digital set-top boxes (STBs) and analog/digital hard disk or videocassette recorders (VCRs).

CEA-775

Service Selection Information for Digital Storage Media Interoperability

A digital storage device such as a D-VHS or hard disk digital recorder may be used by the DTV or by another source device such as a cable set-top box to record or time-shift digital television signals. This standard supports the use of such storage devices by defining Service Selection Information (SSI), methods for managing discontinuities that occur during recording and playback, and rules for management of partial transport streams.

CEA-775.2

DTV Remodulator Specification with Enhanced OSD Capability

This standard defines minimum specifications for a one-way data path utilizing an 8 VSB trellis or a 16 VSB remodulator in compliance with ATSC Standard A/53, Annex D. This standard also defines on-screen display (OSD) capabilities. This standard applies to any type of device used to connect to an ATSC compliant digital television receiver (DTV) receiver. Devices meeting this standard should interoperate with any ATSC compliant receiver that also supports "monitor mode." This standard addresses required RF output specifications, on-screen display (OSD) capabilities, and capability profiles for a DTV remodulator and recommendations concerning input to the remodulator. This standard does not address 8 VSB without OSD. For information concerning 8 VSB without OSD, see also EIA-762 and EIA-799.

CEA-761

DTV Remodulator Specification

This standard defines a minimum specification for a one-way data path utilizing an 8-VSB-trellis remodulator in compliance with ATSC A/53, Annex D. This standard applies to any type of device used to connect to an ATSC compliant digital television receiver (DTV) receiver. Devices meeting this standard should interoperate with any ATSC compliant receiver that also supports "monitor mode" (see EIA CEB-5.) This standard addresses both required RF output specifications for a DTV remodulator and recommendations concerning input to the remodulator.

CEA-762

On-Screen Display Specification

This standard specifies syntax semantics for bitmapped graphics data typically used for on-screen display (OSD). The standard is applicable whenever it is necessary to specify a standard method for delivery of bitmapped graphics data. The pixel formats include optional alpha-blend and transparency attributes to support composition of graphics over analog or digitally decoded video within the display.

CEA-799

Data Services on the Component Video Interfaces

This standard specifies how data services are carried on component video interfaces (CVI), as described in EIA-770.1-A (for 2H 480p signals only), EIA-770.2-A (for 2H 480p signals only) and EIA-770.3-A. This standard applies to all CE devices carrying data services on the CVI vertical blanking interval (VBI). This standard does not apply to signals, which originate in 1H 480I, as defined in EIA-770.1-A and EIA-770.2-A. The first data service defined is Copy Generation Management System (CGMS) information; including signal format and data structure when carried by the VBI of standard definition progressive and high definition YPbPr type component video signals. It is also intended to be usable when the YPbPr signal is converted into other component video interfaces including RGB and VGA.

CEA-805

Application Profiles for EIA-775A Compliant DTVs

This standard specifies profiles for various applications of the EIA-775A standard. The application areas covered here include digital streams compliant with ATSC terrestrial broadcast, direct-broadcast satellite (DBS), and standard definition Digital Video (DV) camcorders.

CEA-849

A DTV Profile for Uncompressed High Speed Digital Interfaces

This standard defines video timing requirements, discovery structures, and a data transfer structure (InfoPacket) that is used for building uncompressed, baseband, digital interfaces on digital televisions (DTV) or DTV Monitors. A single physical interface is not specified, but any interface implemented must use VESA Enhanced Extended Display Identification Data Standard (VESA E-EDID) for format discovery.

CEA-861

Recommended Practice for DTV Receiver Monitor Mode Capability

CEB5 is intended to provide recommendations to digital television (DTV) designers/manufacturers concerning a "monitor" mode capability. See EIA-762 for minimum specifications for a DTV remodulator.

CEA CEB-5

EDID Recommended Practice for EIA/CEA-861

This Bulletin addresses issues related to the VESA Extended Display Identification Data (EDID) tables utilized within the EIA/CEA-861 standard.

Home Networks

Web Enhanced DTV 1394 Interface Specification

This standard includes mechanisms to allow a source of MPEG service to utilize the MPEG decoding and display capabilities in a DTV.

CEA-775.1

A DTV Profile for Uncompressed High Speed Digital Interfaces

This standard defines video timing requirements, discovery structures, and a data transfer structure (InfoPacket) that is used for building uncompressed, baseband, digital interfaces on digital televisions (DTV) or DTV Monitors. A single physical interface is not specified, but any interface implemented must use VESA Enhanced Extended Display Identification Data Standard (VESA E-EDID) for format discovery

CEA-851

IP-Based Digital Telephony for the Versatile Home Network

This standard defines IP-based telephony for the Versatile Home Network (VHN).

CEA-851.1

Security Services for the Versatile Home Network

This standard defines IP-based telephony for the Versatile Home Network (VHN).

CEA-851.2

Remote Control Command Pass-through Standard for Home Networking

This specification defines a standardized method for communication of certain basic operational functions between devices in a home network.

CEA-931

Quality of Service Priority Groupings for 802.1Q

CEA-2007

Digital Entertainment Network

Digital Entertainment Network Initiative (DENiTM) defines a very specific type of network. It collects existing standards and specifies how they work together. By clarifying how over 60 different standards interrelate, DENi makes interoperability between different manufacturers' audio, video, and imaging products possible. This interoperability is achieved with Ethernet and Internet Protocol (IP) as the common network connection.

CEA-2008

LonWorks®

Control Network Protocol Specification

This specification applies to a communication protocol for networked control systems. The protocol provides peer-to-peer communication for networked control and is suitable for implementing both peer-to-peer and master-slave control strategies. This specification describes services in layers 2-7. In the layer 2 specification, it also describes the data link layer and the MAC sub-layer interface to the physical layer. The physical layer provides a choice of transmission media. The interface described in this specification supports multiple transmission media at the physical layer.

CEA-709.1

Control Network Power Line (PL) Channel Specification

This document specifies the Control Network Power Line (PL) Channel and serves as a companion document to the EIA-709.1 Control Network Protocol Specification [1]. Its purpose is to present the information necessary for the development of a PL physical network and nodes to communicate the share information over the network. This is one of a series of documents covering the various media that comprise the EIA-709 Standard.

CEA-709.2

Free-Topology Twisted-Pair Channel Specification

This document specifies the EIA-709.3 free-topology twisted-pair channel and serves as a companion document to the EIA-709.1 Control Network Protocol Specification [1]. The channel supports communication at 78.125 kbps between multiple nodes, each of which consists of a transceiver, a protocol processor, and application processor, a power supply, and application electronics.

CEA-709.3

Fiber-Optic Channel Specification

In conjunction with ANSI/EIA-709.1-A Control Network Protocol Specification, EIA-709.4 defines a complete 7-layer protocol stack for communications on an EIA-709.4 single-fiber (half-duplex) fiber-optic channel. EIA-709.4 specifies the physical layer (OSI Layer 1) requirements for the EIA -709.4 fiber-optic channel, which encompasses the interface to the Media Access Control (MAC) layer and the interface to the medium. The single-fiber channel implemented as specified in EIA-709.4 allows two nodes to communicate bidirectionally across a single piece of fiber cable.

CEA-709.4

Tunneling Component Network Protocols Over Internet Protocol Channels

CEA-852

Device Plug-in Interface to EIA/CEA-709.1 Network Tools

This specification applies to a set of software interfaces between ANSI/EIA-709.1-B-2002 (EIA-709.1) Network Management Tools and device type specific software for device installation, configuration and commissioning, resulting in enhanced functionality of network management tools. This specification also provides backward compatibility to ANSI/EIA-709.1-A-1999 tools. Supported devices include those that meet the EIA-709.1 standard for nodes and the objects they contain which communicate on an EIA-709.1 standard network. Network tool software and device plug-in software properly implementing their appropriate sides of the interfaces described in this specification interoperate on Microsoft® Windows® and Windows NT® platforms using the Component Object Model (COM) technology for interoperability.

CEA-860

Product Labeling

Outer Shipping Container Bar Code Label Standard

The intent of this Standard is to facilitate automation within shipping, distribution, transportation and receiving operations using bar code technology.

CEA-556

Product and Packaging Bar Code Standard

The purpose of this Standard is to assist manufacturers of consumer electronic products in properly applying bar code symbols to products that will move through the retail channel of distribution to the ultimate consumer. The Universal Product Code (UPC) and the International Article Numbering Association (EAN), bar code symbols are being accepted worldwide for point-of-sale data capture by retailers. These bar codes uniquely identify the manufacturer and the product at the stock keeping unit (SKU) level.

CEA-621

Product Package Bar Code Label Standard for Non-Retail Applications

This Standard defines minimum requirements for identifying product packages that are distributed outside the originating location. These specifications provide maximum flexibility for size, location, and identification information. Intended applications include, but are not limited to systems that automate control of product packages during production, inventory, distribution and repair.

CEA-624

Component Marking Standard

The purpose of this Standard is to establish a common structure for encoding data to be marked on electronic components to facilitate automation. This standard provides a means for components to be marked and read in a fixtured environment at any manufacturer facility and is read by customers purchasing components for subsequent manufacturing operations.

CEA-706

Product Marking Standard

This Standard defines minimum requirements for identifying products. This standard provides guidelines for product marking with machine-readable symbols. This standard covers both labels and direct marking of products. This standard includes testing procedures for label adhesive characteristics and mark durability

CEA-802

Canadian Standards Association (CSA)

General Requirements - Canadian Electrical Code, Part II

CSA C22.2 #0

Industrial Control Equipment

CSA C22.2 #14

Enclosures for use in Class II Groups E, F and G Hazardous Locations

CSA C22.2 #25

Non-Incendive Electrical Equipment for use in Class I, Division 2 Hazardous Locations Industrial Products First Edition; General Instruction

CSA C22.2 #213

Electrical Safety

Electrical Safety a Tool for Understanding the European Union's Low Voltage Directive Based on EN 60950

Based on the Standard EN 60950, this multimedia CD-ROM software tool provides tips on designing a compliant product and meeting conformity assessment requirements.

ELECTRICAL SAFETY

Electronic Components, Assemblies, & Materials Association (ECA)

Cabinets, Racks, Panels, and Associated Equipment

EIA-310

Electronic Components, Assemblies, & Materials Association (ECA)

Ceramic Dielectric Capacitors Classes I, II, III and IV Part I: Characteristics and Requirements

EIA-198-1

Ceramic Dielectric Capacitors Classes I, II, III and IV Part II: Test Methods

This standard establishes uniform methods for testing ceramic capacitors, including basic environmental tests to determine resistance to deleterious effects of natural elements, and physical and electrical tests.

EIA-198-2

Lead Taping of Components in Axial Lead Configuration for Automatic Handling

This standard is formulated to provide dimensions and tolerances necessary to tape axial leaded components after manufacture so that they can be automatically handled. Axial leaded components are leaded components with the lead egress concentric with the longitudinal axis centerline of the component body.

EIA-296

Cabinets, Racks, Panels, and Associated Equipment

EIA-310

Electrical Connector/Socket Test Procedures Including Environmental Classifications

This standard establishes a recommended minimum test sequence and test procedures for electrical connectors and sockets. Includes administrative details and guidelines for connector/socket qualification and an annex for pertinent technical information.

EIA-364

Normal Force Test Procedure for Electrical Connectors
This procedure determines the magnitude of normal force being generated by a contact system at any given deflection within its normal operating levels. This data and its relationship to contact pressure allows the electrical integrity and stability of the contact interface to be evaluated in proper perspective when integrated with other monitored attributes. The procedure described herein is considered a destructive test and is not intended for acceptance testing.
EIA-364-04

Fluid Immersion Test Procedure for Electrical Connectors
This standard establishes test methods to determine the ability of an electrical connector or connector assembly to resist degradation due to exposure to specific fluids with which the connector assembly may come into contact during its service life.
EIA-364-10

Stripping Force Test (Solderless Wrapped Connectors) Test Procedure for Electrical Connectors
The object of this test is to determine the force required to move a solderless wire wrapped connection along the post parallel to the axis of the post.
EIA-364-16

TP-28D Vibration Test Procedure for Electrical Connectors and Sockets
This test procedure details a method to assess the ability of electrical connector components to withstand specified severities of vibration. The object of this test is to determine the effects of vibration within the predominant or random vibration frequency ranges and magnitudes that may be encountered during the life of the connector.
EIA-364-28

Capacitance Test Procedure for Electrical Connectors and Sockets
The object of this test is to determine the effects of vibration within the predominant or random vibration frequency ranges and magnitudes that may be encountered during the life of the connector.
EIA-364-30

Humidity Test Procedure for Electrical Connectors and Sockets
This standard established test methods for the evaluation of connectors and sockets as the effects of high humidity and heat influence them. This is an accelerated environmental test, accomplished by continuous exposure of the specimen to high relative humidity at various temperatures.
EIA-364-31

ICE Resistance Test Procedure for Electrical Connectors
The object of this test is to ascertain the ability of mated electrical connectors to resist the effects of ice build-up due to water splashing or brief immersion in water, where water is free to drain off the connector surface.
EIA-364-51

TP-65A Mixed Flowing Gas
This specification covers the test procedure for producing environmentally related corrosive atmospheres to determine the reaction to plated or unplated surfaces when exposed to different concentrations of lowing gas mixtures.
EIA-364-65

Inductance Measurement Test Procedure for Electrical Connectors and Sockets (10 nH - 100 nH)
This test procedure applies to the measurement of inductance values over the range of 10 to 100 nanohenrys. The procedure defines the method used to perform the measurement of the self inductance of connector pin and socket assemblies. Tests of printed circuit board sockets will require the use of special adapters which have been evaluated prior to the measurement.
EIA-364-69

Cavity-to-Cavity Leakage Bonding Intergrity Test Procedure for Electrical Connectors
This test procedure is intended to provide a technique for evaluating the sealing integrity of the contact cavity walls of an environmentally sealed electrical connector by detecting leakage between a given contact cavity and those adjacent to it. This technique is suitable for application at the onset of a series of environmental tests (e.g., qualification or periodic inspection) to evaluate the soundness of the product before the start of test.
EIA-364-78

TP-80 Low Frequency Shielding Effectiveness Test Procedure for Electrical Connectors and Sockets
EIA-364-80

Dust Test for Electrical Connectors and Sockets
The object of this test is to determine the susceptibility of a connector/socket system to the potential degration mechanism of a dust/fiber environment common to an office or manufacturing area.
EIA-364-91

Lead Taping of Components in the Radial Configuration for Automatic Handling
This standard was formulated to provide dimensions and tolerances necessary to lead tape components such that they may be automatically handled in the radial format. This standard covers the lead taping requirements for components having radial configured leads, provided these components may be taped in accordance with the requirements of this document.
EIA-468

8mm and 12mm Punched and Embosed Carrier Taping of Surface Mount Components for Automatic Handling
This standard covers requirements for taping surface mount components. Future documentation will be issued to define requirements for higher taping accuracies for smaller device sizes. This standard was formulated to provide dimensions and tolerances necessary to tape surface mount components such that they may be automatically handled.
EIA-481-1

16mm and 24mm Embossed Carrier Taping of Surface Mount Components for Automatic Handling (ANSI/EIA-481-2-91)
This standard was formulated to provide dimensions and tolerances necessary to tape surface mounted components such that they may be automatically handled.
EIA-481-2

Detail Specification for 2 Millimeter, Two Part Connectors for use with Printed Boards and Backplanes
This standard is applicable to modular two-part connectors for printed boards associate with equipment for telecommunication or electronic devices using similar techniques.
EIA-616

8 mm Punched and Embossed Carrier Taping of Surface Mount Components for Automatic Handling of Devices Generally Smaller than 2.0 mm x 1.2 mm
This standard covers requirements for taping surface mount components generally smaller than 2.0 x 1.2 mm and requiring high precision taping of automatic handling.
EIA-726

Requirements for Soldered Electrical and Electronic Assemblies
This standard describes materials, methods, and acceptance criteria for producing soldered electrical and electronic assemblies.
J-STD-001

Solderability Tests for Component Leads, Terminations, Lugs, Terminals and Wires
This standard prescribes the recommended test methods, defects definitions, acceptance criteria, and illustrations for assessing the solderability of electronic component leads, terminations, solid wire, stranded wire, lugs and tabs. This standard is intended for use by both vendor and user.
J-STD-002

Electronic Industries Alliance (EIA)

8mm Through 200mm Embossed Carrier Taping and 8mm and 12mm Punched Carrier Taping of Surface Mount Components for Automatic Handling
EIA-481

Electronic Industries Alliance (EIA)

Colors for Color Identification and Coding
This standard specifies the color ranges used to identify electronic components, equipment, and wire and cable insulation, and establishes a standard color-number relationship. Materials to be color coded are separated into two categories, and nominal colors and tolerance ranges are established for each. For instrumental testing, categories of specialized color charts are specified.
EIA-359

Preparation for the Delivery of Electrical and Electronic Components
This standard establishes and defines the general requirements for packaging and packing of electrical and electronic components for domestic shipment and storage at the user's facility for a period 90 days.
EIA-383

Date Code Marking
This standard describes a system for identification of the date of manufacturer of an electronic component or equipment through the manufacturer's marking the product with a series of numbers known as the EIA date code. EIA additionally provides a scheme for standardization of the calendar year and week in a date code. If the date code is desired by the customer it must be specified in the contractual agreements (purchase order or ordering specification).
EIA-476

8mm Through 200mm Embossed Carrier Taping and 8mm and 12mm Punched Carrier Taping of Surface Mount Components for Automatic Handling
EIA-481

Packaging Material Standards for ESD Sensitive Items
Revision and upgrading of EIA/IS-5-A and EIA/IS-5-A-1. EIA-541 establishes requirements for packaging materials used in providing protection for solid-state devices. Once packaging items for a particular packaging method or procedure are identified, this standard provides useful specifications for the procurement of these items.
EIA-541

Packaging Materials Standards for Moisture Sensitive Items
This standard establishes guidelines for packaging materials used to protect moisture sensitive, plastic, surface mountable electronic devices from harmful effects of absorbed moisture during shipping and storage. This packaging application is known in the industry as "dry packaging". Certain material properties critical to the use and performance of moisture barrier packaging applications are given; but the form or shape in which these materials are used is unrestricted by this Standard. The appropriate level of moisture protection shall be determined by the user's or manufacturer's requirements. Electrostatic Discharge (ESD) protection may also be of concern in moisture barrier packaging applications but is not within the scope of this standard. (Refer to EIA-541 for packaging material standards for ESD sensitive items.)
EIA-583

Product Life Cycle Data Model
This document defines a Product Life Cycle curve model for use by the electronics industry to standardize the terms and definitions used to describe the life cycle status of a product. When required by the customer, a component or piece of equipment needs to be identified as to where it is in the life cycle. Such information can be useful when specifying parts for use in new systems or as replacements in existing systems. This information shall be classified by phases or stages on the Product Life Cycle curve. The same classification shall be used across the electronics industry.
EIA-724

Bare Die and Chip Scale Packages Taped in 8 mm and 12 mm Carrier Tape for Automatic Handling
EIA-763

User's Application Guide to Fuses
EIA-772

FM Approvals

Electrical Equipment for use in Hazardous (Classified) Locations General Requirements
FM APPROVAL 3600

Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1, and Class I, Zone 0 and 1 Hazardous (Classified) Locations
FM APPROVAL 3610

Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2, Hazardous (Classified) Locations
FM APPROVAL 3611

Explosionproof Electrical Equipment General Requirements
FM APPROVAL 3615

Electrical and Electronic Test, Measuring and Process Control Equipment
FM APPROVAL 3810

Government Electronics and Information Technology Association (GEIA)

National Consensus Standard for Configuration Management
This standard presents configuration management from the viewpoint that configuration management practices are employed because they make good business sense rather than because requirements are imposed by an external customer.
EIA-649

Government Electronics and Information Technology Association (GEIA)

Processes for Engineering a System
The purpose of this standard is to provide an integrated set of fundamental processes to aid a developer in the engineering or reengineering of a system.
EIA-632

Processes for Engineering a System - Electronic Yearly Subscription Only - Five User License for Network
EIA-632 ES

National Consensus Standard for Configuration Management
This standard presents configuration management from the viewpoint that configuration management practices are employed because they make good business sense rather than because requirements are imposed by an external customer.
EIA-649

National Consensus Standard for Configuration Management - Electronic Yearly Subscription Only - Five User License for Network
EIA-649 ES

Earned Value Management Systems
The earned value management system guidelines incorporate best business practices to provide strong benefits for program or enterprise planning and control. Processes include integration of program scope, schedule, and cost objectives, establishment of a baseline plan for accomplishment of program objectives, and use of earned value techniques for performance measurement during the execution of a program.
EIA-748

Earned Value Management Systems - Electronic Yearly Subscription Only - Five User License for Network
EIA-748 ES

Industry Implementation of International Standard ISO/IEC 12207: 1995 - (ISO/IEC 12207) Standard for Information Technology - Software Life Cycle Processes
An adaptation of the international standard, ISO/IEC 12207, IEEE/EIA 12207.0 provides a framework of software life cycle processes suitable for use in the acquisition, supply, development, maintenance, and operation of software.
IEEE/EIA 12207.0

Guide for Information Technology - Software Life Cycle Processes Life Cycle Data
This guide provides information on life cycle data resulting from the processes of IEEE/EIA-12207.0. It describes the relationship among the following: the content of the life cycle data information items; references to documentation of life cycle data in IEEE/EIA-12207.0; and sources of detailed software product information.
IEEE/EIA 12207.1

Guide for Information Technology - Software Life Cycle Processes Implementations Considerations
This guide provides guidance in implementing the process requirements of IEEE/EIA-12207.0. The guidance is intended to summarize the best practices of the software industry in the context of the process structure provided by ISO/IEC 12207 and provides additions, alternatives, and clarifications to ISO/IEC 12207's life cycle processes as derived from U.S. practices.
IEEE/EIA 12207.2

Standard for Industry Implementation of International Standard ISO/IEC 1207: 1995 (ISO/IEC 12207) Standard for Information Technology
Includes IEEE/EIA 12207.0, 12207.1, and 12207.2.
IEEE/EIA 12207 SET

Standard for Industry Implementation of International Standard ISO/IEC 1207: 1995 (ISO/IEC 12207) Standard for Information Technology - Electronic Yearly Subscription Only - Five User License for Network
Includes IEEE/EIA 12207.0, 12207.1, and 12207.2.
IEEE/EIA 12207 SET ES

Insulated Cable Engineers Association, Inc. (ICEA)

Weather Resistant Polyethylene Covered Conductors
ICEA S-70-547

Neutral - Supported Power Cable Assemblies with Weather-Resistant Extruded Insulation Rated 600 Volts
ICEA S-76-474

Standard for 600 Volt Rated Cables of Ruggedized Design for Burial Installations as Single Conductors or Assemblies of Single Conductors
ICEA S-81-570

Standard for Consentric Neutral Cables Rated 5,000 - 46,000 Volts
ICEA S-94-649

Utility Sheilded Power Cables 5 - 46 kV
ICEA S-97-682

International Electrotechnical Commission (IEC)

Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment
CISPR 22

Rotating Electrical Machines - Part 1: Rating and Performance
IEC 60034-1

Audio, Video and Similar Electronic Apparatus - Safety Requirements
IEC 60065

Safety of Machinery - Electrical Equipment of Machines - Part 1: General Requirements
IEC 60204-1

Appliance Couplers for Household and Similar General Purposes - Part 1: General Requirements
IEC 60320-1

Degrees of Protection Provided by Enclosures (IP Code)
IEC 60529

Information Technology Equipment - Safety - Part 1: General Requirements
IEC 60950-1

International Committee for Information Technology (INCITS)

Information Systems - Small Computer Systems Interface 2 (SCSI-2)
Defines an input/output bus for interconnecting computers and peripheral devices. It defines extensions to the Small Computer System Interface (ISO 9316:1989), referred to herein as SCSI-1.
ANSI INCITS 131

Information Systems - Bar Code Print Quality - Guideline
Covers the optical characteristics of a printed bar code symbol. This document shall be used with the appropriate application specifications, or symbology specifications, or both. The appropriate application specifications, or symbology specifications, or both, shall take precedence over this guideline.
ANSI INCITS 182

Information Technology - Fibre Channel - Physical and Signaling Interface (FC-PH)
Describes the physical and signalling interface of a high-performance serial link for support of the Upper Level Protocols (ULPs) associated with HIPPI, IPI, SCSI, IP, and others.
ANSI INCITS 230

JEDEC - Solid State Technology Association

Symbol and Label for Electrostatic Sensitive Devices
EIA-471

Failure Mechanisms and Models for Silicon Semiconductor Devices
JEP122 has been developed in response to growing industry interest in the subject of failure mechanisms and their respective activation energies for use in system failure rates estimates.
JEDEC JEP 122

Temperature Cycling
This standard provides a method for determining solid state devices capability to withstand extreme temperature cycling.
JEDEC JESD 22-A104

Requirements for Handling Electrostatic-Discharge-Sensitive (ESDS) Devices
This standard establishes the minimum requirements for electrostatic discharge (ESD) control methods and materials used to protect electronic devices that are susceptible to damage or degradation from electrostatic discharge (ESD).
JEDEC JESD 625

Joint Standards

Database Languages - SQL - Part 1: Framework (SQL/Framework)
ANSI/ISO/IEC 9075-1

Database Languages - SQL - Part 2: Foundation (SQL/Framework)
ANSI/ISO/IEC 9075-2

Information Technology - Database Languages - SQL - Part 3: Call-Level Interface (SQL/CLI)
ANSI/ISO/IEC 9075-3

Requirement for Soldered Electrical and Electronic Assemblies
J-STD-001
J-STD-001 CD

Solderability Tests for Component Leads, Terminations, Lugs, Terminals and Wires
J-STD-002
J-STD-002 CD

Solderability Test Methods for Printed Wiring Boards
J-STD-003
J-STD-003 CD

Requirements for Soldering Fluxes
J-STD-004
J-STD-004 CD

Requirements for Soldering Pastes
J-STD-005
J-STD-005 CD

Requirements for Electronics Grade Solder Alloys and Fluxed and Non-Fluxed Solid Solders for Electronic Soldering Applications
J-STD-006
J-STD-006 CD

Implementation of Flip Chip and Chip Scale Technology
J-STD-012

Implementation of Ball Grid Array and Other High Density Technology
J-STD-013

Moisture/Reflow Sensitivity Classification for Non-Hermetic Solid State Surface Mount Devices
J-STD-020
J-STD-020 CD

Lawfully Authorized Electronic Surveillance (CALEA)
This standard defines the interfaces between a telecommunication service provider (TSP) and a law enforcement agency (LEA) to assist the LEA in conducting lawfully authorized electronic surveillance. A TSP, manufacturer, or support service provider that is in compliance with this standard will have a "safe harbor" under Section 107 of the Communications Assistance for Law Enforcement Act (CALEA), Public Law 103-414.
J-STD-025
J-STD-025 CD

Standard for Handling, Packing, Shipping and Use of Moisture/Reflow Sensitive Surface Mount Devices
J-STD-033

Wireless Enhanced Emergency Services: PSAP Perspective
J-STD-034

Enhanced Wireless 9-1-1 Phase 2
J-STD-036

National Electrical Manufacturers Association (NEMA)

Motors and Generators
The NEMA MG 1 standard assists users in the proper selection and application of motors and generators. While providing for changes in user needs, advances in technology, and changing economic trends. The MG 1 covers mechanical vibration, methods of cooling, rotating electrical machines, motor rating, dimensions, test and performance, and DC generators.
NEMA MG 1

Military Standards and Specifications

Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, General Specification for
MIL-DTL-38999

Reliability Prediction of Electronic Equipment
The purpose of this handbook is to establish and maintain consistent and uniform methods for estimating the inherent reliability (i.e., the reliability of a mature design) of military electronic equipment and systems. It provides a common basis for reliability predictions during acquisition programs for military electronic systems and equipment. It also establishes a common basis for comparing and evaluating reliability predictions of related or competitive designs. The handbook is intended to be used as a tool to increase the reliability of the equipment being designed.
MIL-HDBK-217

General Guidelines for Electronic Equipment
MIL-HDBK-454

Semiconductor Devices, General Specification for
MIL-PRF-19500

Test Method Standard Electronic and Electrical Component Parts
MIL-STD-202

Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment
MIL-STD-461

Test Methods for Semiconductor Devices
MIL-STD-750

Test Methods and Procedures for Microelectronics
MIL-STD-883

National Electrical Contractors Association (NECA)

Standard for Installing Commercial Building Telecommunications Systems
ANSI/NECA/BICSI 568

Recommended Practice for Installing and Maintaining Industrial Heat Tracing Systems
NECA 202

Recommended Practice for Installing and Maintaining Motor Control Centers
NECA 402

Installing Indoor Commercial Lighting Systems
NECA/IESNA 500

Recommended Practice for Installing Exterior Lighting Systems
NECA/IESNA 501

National Electrical Manufacturers Association (NEMA)

NEMA
Setting Standards for Excellence

NEMA Electroindustry Newsletter

NEMA's monthly magazine, Electroindustry, reports breaking news and trends in the marketplace, standards development, economics, technology, and government affairs. Representing a $76 billion domestic shipping market, Electroindustry is sent to 6,000 high-level Electroindustry professionals and read by thousands of others seeking information on legislative issues, standardization trends, marketing opportunities, manufacturing innovations, human resources, and activities of the association and its member companies. Their buying power represents a huge potential for increased sales of both products and services.

NEMA NEWSLETTER

Z535 Standards for Safety Signs and Colors Set

Please see page 33 for a complete description.

ANSI Z535 SERIES

ANSI Z535 SERIES CD

Busway, Conduit, Raceways

Rigid Steel Conduit - Zinc Coated

Covers the requirements for rigid steel conduit for use as a raceway for the wire or cables of an electrical system. Approved as an American National Standard

ANSI C80.1

Instructions for Handling, Installation, Operation, and Maintenance of Busways Rated 600 Volts or Less

Covers products for distribution of electric power at 600 volts or less, consisting of enclosed sectionalized prefabricated busbars rated at 100 amperes or more, and associated structures and fittings classified as: feeder busways (indoor or outdoor), plug-in busways (outdoor only), and accessories required to complete the busway system. Also available in bulk, 5" X 7" format and Spanish language.

NEMA BU 1.1

Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing and Cable

Covers fittings that are a part of electrical raceway systems designed for use as intended by the requirements of NFPA 70. Specifically covers fittings for use with non-flexible tubular raceways-rigid and intermediate metal conduit, electrical metallic tubing. Approved as an American National Standard and adopted by the U.S. Department of Defense.

NEMA FB 1

Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit

Defines the minimum requirements for PVC coated conduit, which should be included in specifications written for this product. Inclusion of these standards in the specification assures the user of receiving the highest quality product available and will prevent substitution of lower quality material, which may not perform satisfactorily in corrosive environments.

NEMA RN 1

Electrical Polyvinyl Chloride (PVC) Conduit

Covers electrical polyvinyl chloride (PVC) conduit of types EPC-40--designed for normal-duty applications above ground and concrete encased applications or direct burial--and EPC-80--designed for heavy-duty (areas of physical damage) applications above ground and concrete encased applications or direct burial.

NEMA TC 2

PVC Fittings for use with Rigid PVC Conduit and Tubing

Lists dimensions and other significant requirements to establish some of the properties of these products and assists in selecting and obtaining the proper product for a specific need. Included are requirements for materials, workmanship, dimensions, physical properties, couplings, female adapters, male terminal adapters, junction box adapters, reducers, caps, and end-bells. Adopted by the U.S. Department of Defense.

NEMA TC 3

PVC Plastic Utilities Duct for Underground Installations

Lists dimensions and other significant requirements to set forth some of the properties or these products and assists in selecting and obtaining the proper product for a particular need. Allows end-users to review dimensional requirements, material properties, and physical characteristics of EB and DB ducts. Adopted by the U.S. Department of Defense.

NEMA TC 6 & 8

Metal Cable Tray Systems

Specifies the requirements for metal cable trays and associated fittings designed for use in accordance with the rules of the Canadian Electrical Code, Part I, and the National Electrical Code.

NEMA VE 1

Cable Tray Installation Guidelines

Addresses shipping, handling, storing, and installation of metal cable tray systems. Information on maintenance and system modification is also provided.

NEMA VE 2

Distribution Equipment

Molded-Case Circuit Breakers, Molded Case Switches, and Circuit-Breaker Enclosures

Covers molded-case circuit breakers, circuit breaker and ground-fault circuit interrupters, fused circuit breakers, and accessory high-fault protectors.

NEMA AB 1

Panelboards

Covers single panelboards or groups of panel units suitable for assembly in the form of single panelboards, including buses, with or without switches or automatic overload protective devices (fuses or circuit breakers), or both. These units are used in the distribution of electricity for light, heat, and power at 600 volts and less, with 1600 ampere mains and less and 1200 ampere branch circuits and less. Excluded are live front panelboards, panelboards using cast enclosures for special service conditions, and panelboards designed primarily for residential and light commercial service equipment. (PB 1.1 is included at no cost).

NEMA PB 1

Proper Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less

Covers single panelboards or groups of panel units suitable for assembly in the form of single panelboards, including buses, and with or without switches or automatic overload protective devices (fuses or circuit breakers) or both. Specifically excluded are live-front panelboards, panelboards employing cast enclosures for special service conditions, and panelboards designed primarily for residential and light commercial service equipment.

NEMA PB 1.1

Deadfront Distribution Switchboards

Covers floor-mounted deadfront swithchboards rated 6000 amperes or less, 600 volts or less, which consist of an enclosure, molded case circuit breakers, low-voltage power circuit breakers, fusible or non-fusible switches, instruments, metering equipment, monitoring or control equipment, with associated interconnections and supporting structures. These units are used in the distribution of electricity for light, heat, and power. Adopted by the U.S. Department of Defense.

NEMA PB 2

General Instructions for Proper Handling, Installation, Operation, and Maintenance of Deadfront Distribution Switchboards Rated 600 Volts or Less

Covers floor-mounted deadfront switchboards which consist of an enclosure, molded-case and low-voltage power circuit breakers, fusible or non-fusible switches, instruments, and metering, monitoring, or control equipment, with associated interconnections and supporting structures. Adopted by the U.S. Department of Defense.

NEMA PB 2.1

Application Guide for Ground Fault Protective Devices for Equipment

A guide of practical information containing instructions for the safe and proper application of ground fault protective devices (GFP devices). GFP devices include current sensing devices, relaying equipment, or combinations of current sensing devices and relaying equipment, or other equivalent protective equipment which will operate to cause a disconnecting means to open all ungrounded conductors at predetermined values of ground fault current and time.

NEMA PB 2.2

Enclosures

Enclosures For Electrical Equipment (1000 Volts Maximum)

Consolidates the descriptions and applications, features and test criteria, and design tests of all NEMA type enclosures (except for rotary type apparatus) into a single document. Does not cover manufacturing standards for specific products.

NEMA 250

Industrial Control and Automation Systems

Industrial Control and Systems General Requirements

Provides practical general information concerning ratings, construction, testing, performance, and manufacture of industrial control and systems equipment and terminal blocks. This publication is strongly recommended for use in conjunction with other NEMA ICS publications.

NEMA ICS 1

Industrial Control and Systems Controllers, Contactors and Overload Relays Rated 600 Volts

Provides general requirements for manual and magnetic controllers, and covers the requirements for magnetic and nonmagnetic motor controllers, overload relays, and magnetic lighting contactors.

NEMA ICS 2

Industrial Controls and Systems Enclosures

Covers the enclosure requirements of all industrial control devices functioning on commercial voltages of up to 750 volts DC, or up to 7200 volts AC. Includes information concerning ratings, construction, testing, performance and manufacture. Use in conjunction with NEMA 250.

NEMA ICS 6

Insulating Products

Test Methods for Electrical Power Insulators

Comprises a manual of test methods to be followed in making tests to determine the characteristics of electrical power insulators. Individual test shall be made only when specified.

ANSI C29.1

For Insulators, Wet-Process Porcelain and Toughened Glass - Suspension Type

Covers suspension-type insulators, 4-1/4 inches (108 millimeters) in diameter and larger, made of wet-process porcelain or of toughened glass and used in the transmission and distribution of electrical energy.

ANSI C29.2

Porcelain Insulators-High Voltage Line-Post Type

Covers materials, dimensions, physical characteristics, and testing information for high-voltage line-post type insulators made of wet process porcelain and used in the transmission and distribution of energy.

ANSI C29.7

Composite Suspension Insulators for Overhead Transmission Lines - Tests

ANSI C29.11

Calendered Aramid Papers Used for Electrical Insulation

A new standard for qualification and testing of calendered aramid papers for use as electrical insulation. Aramid polymers can be processed into various forms, including resin, fiber, film, paper, or pressboard. This standard is the result of a collaboration between NEMA members. The military could adopt it in lieu of its own standard, traditionally referred to as a specification.

NEMA FI 3

Application Guide for Ceramic Suspension Insulators

Guidelines for the proper application of ceramic (porcelain and toughened glass) suspension insulators.

NEMA HV 2

High-Pressure Decorative Laminates

Covers high pressure decorative laminate (HPDL) sheets which consist of paper; fabrics; or other core materials that have been laminated at pressures of more than 750 pounds per square inch (5.17 MPa) using thermosetting condensation resins as binders. Includes acetate charts; not available electronically.

NEMA LD 3

Industrial Laminating Thermosetting Products

Includes information concerning the manufacture; testing; and performance of laminated thermosetting products in the form of sheets; rods; and tubes. A new format for the standard has been established in which the requirements for the physical and electrical properties of the individual NEMA Grades have been consolidated and placed on individual specification sheets. With this format all of the information on an individual material will be found in one place.

NEMA LI 1

Measuring Equipment

Electric Meters Code for Electricity Metering

Establishes acceptable performance criteria for new types of AC watthour meters, demand meters, demand registers, pulse devices, and auxiliary devices. It describes acceptable in-service performance levels for meters and devices used in revenue metering.

ANSI C12.1

Watthour Meters

Covers the physical aspects of both detachable and bottom-connected watthour meters and associated registers. These include ratings, internal wiring arrangements, pertinent dimensions, markings, and other general specifications. Approved as an American National Standard

ANSI C12.10

Protocol Specification for ANSI Type 2 Optical Port

Details the criteria required for communications with an electric power metering device by another device via an optical port. It also provides details for a complete implementation of an OSI 7-layer model.

ANSI C12.18

Utility Industry End Device Data Tables

Defines a table structure for utility application data to be passed between an end device and a computer. Does not define device design criteria nor specify the language or protocol used to transport that data. The purpose of the tables is to define structures for transporting data to and from end devices.

ANSI C12.19

Electricity Meters 0.2 and 0.5 Accuracy Classes

Establishes the physical aspects and acceptable performance criteria for 0.2 and 0.5 accuracy class electricity meters meeting Blondel's Theorem.

ANSI C12.20

Protocol Specification for Telephone Modem Communication

The standard details the criteria required for communications between an electric power metering device and a utility host via a modem connected to the switched telephone network. The utility host could be a laptop computer, a master station system, an electric power-metering device, or some other electronic communications device. The standard does not specify implementation requirements of the telephone switch network to the modem, nor does it include definitions for the establishment of the communication channel.

ANSI C12.21

Motors and Generators

Motors and Generators

Assists users in the proper selection and application of motors and generators. Revised periodically, the standard provides for changes in user needs, advances in technology, and changing economic trends. Practical information concerning performance, safety, test, construction, and manufacture of alternating current and direct-current motors and generators.

NEMA MG 1
NEMA MG 1 CD
NEMA MG 1 SET
NEMA MG 1 CONDENSED

Safety Standards and Guide for Selection, Installation, and Use of Electric Motors and Generators

Provides recommendations for the selection, installation, and use of rotating electric machines in such a manner as to provide for the practical safeguarding of persons and property.

NEMA MG 2

Energy Management Guide for Selection and use of Fixed Frequency Medium AC Squirrel-Cage Polyphase Induction Motors

Provides practical information concerning the proper selection and application of polyphase induction and synchronous motors including installation, operation, and maintenance.

NEMA MG 10

Wire and Cable

Electrical and Electronic PTFE (Polytetrafluoro-Ethylene Insulated High Temperature Hook-Up Wire; Types ET (250 Volts), E (600 Volts) and EE (1000 Volts)

Covers specific requirements for PTFE (polytetrafluoroethylene) insulated solid and stranded wire, designed for the internal wiring of high reliability electrical and electronic equipment. Approved as an American National Standard. Adopted by the U.S. Department of Defense as an alternate non-government standard to MIL-C-16878 for PTFE.

NEMA HP 3

Electrical and Electronic FEP Insulated High Temperature Hook-Up Wire, Types K, KK, and KT

Covers specific requirements for fluorinated ethylene propylene (FEP) insulated solid and stranded wire, designed for the internal wiring of high reliability electrical and electronic equipment. Approved as an American National Standard. Adopted by the U.S. Department of Defense as an alternate non-government standard to MIL-C-16878 for FEP.

NEMA HP 4

Magnet Wire

Definitions, type designations, dimensions, construction, performance, and methods of testing magnet wire generally used in the winding of coils for electrical equipment. Adopted by the U.S. Department of Defense to replace JW-1177 and approved as an American National Standard.

NEMA MW 1000

Binational Wire and Cable Packaging Standard

Covers uniform requirements for packaging electrical wire and cable for the North American wire and cable industry.

NEMA WC 26

Standard Test Methods for Extruded Dielectric Power, Control, Instrumentation, and Portable Cables for Test

Applies to the testing of extruded dielectric insulated power, control, instrumentation, and portable cables.

NEMA WC 53

Standard for Control Cables

Covers materials, construction, and testing of multi-conductor control cables rated up to and including 125 degrees Celsius which convey electrical signals used for monitoring or controlling electrical power systems and their associated processes

NEMA WC 57

Performance Standard for Category 6 and Category 7 100 Ohm Shielded and Unshielded Twisted Pair Cables

Defines minimum electrical performance and allowable conductor sizes, stranding, and shielding for premise wiring cables for voice and data applications for 100 ohm shielded and unshielded twisted pair cables.

NEMA WC 66

Non-Shielded Power Cable 2000 V. or Less

Applies to materials, constructions, and testing of 2000 volt and below nonshielded thermoplastic, crosslinked polyethylene, and crosslinked rubber insulated wires and cables which are used for the transmission and distribution of electrical energy for normal conditions of installation and service, either indoors, outdoors, aerial, underground, or submarine.

NEMA WC 70

Standard for Nonshielded Cables Rated 2001-5000 Volts for Use in the Distribution of Electric Energy

Applies to materials, constructions, and testing of 2001 through 5000 volt nonshielded power cables having insulations of thermoplastic polyethylene, cross-linked polyethylene or crosslinked rubber, of the types shown in Part 4. The insulation shall be either covered with a discharge resistant jacket or shall be a discharge-resistant material without a jacket. Discharge resistant insulations and jackets shall comply with the applicable surface resistivity, U-bend discharge, and track-resistance requirements of Parts 4 and 5.

NEMA WC 71

5-46 kV Shielded Power Cable for Use in the Transmission and Distribution of Electric Energy

Applies to materials, constructions, and testing of 5000 volt to 46,000 volt shielded crosslinked polyethylene, and ethylene propylene rubber insulated wires and cables which are used for the transmission and distribution of electrical energy for normal conditions of installation and service, either indoors, outdoors, aerial, underground, or submarine.

NEMA WC 74

Standard for Aerospace and Industrial Electrical Cable

Developed by the High Performance Wire and Cable Section of NEMA as a non-governmental standard replacement for the MIL-DTL-27500 specification for electrical cable, which is widely used in aerospace and other industries. It provides requirements for finished cables. The component wires are covered by other referenced standards. These cables are intended for signal and low-voltage power applications with defined environment or temperature conditions found in commercial aircraft, military aircraft, and high performance vehicles

NEMA WC 27500

Wiring Devices

General Requirements for Wiring Devices
Contains color references for AC switches, plugs and cord connectors, receptacles, and other related wiring devices.
NEMA WD 1

Wiring Devices - Dimensional Requirements
Covers dimensional requirements for plugs and receptacles rated up to 60 Ampere and 600 Volts, including dimensions for wall plates.
NEMA WD 6

Occupancy Motion Sensors
Covers the definition and measurement of characteristics relevant to the use and application of occupancy motion sensors of passive infrared and ultrasonic types. These sensors are used in systems for control of lighting, heating, ventilating, and air conditioning (HVAC); and other devices.
NEMA WD 7

National Fire Protection Association (NFPA)

National Electrical Code (NEC)
Published by The National Fire Protection Association (NFPA), the NEC provides the most current and most complete safety criteria for all electrical installations.
NFPA 70
NFPA 70 (LL)
NFPA 70 CD

National Electrical Code (NEC) - Codigo Electrico Nacional
NFPA 70 Spanish

National Electrical Code (NEC) Handbook
The NEC Handbook is the official "user guide" to the National Electrical Code. It includes extra facts and figures necessary in helping you interpret the new NEC. Provides expert commentary, examples, diagrams, and illustrations.
NFPA 70 HDBK
NFPA 70 HDBK CD
NFPA 70 HB CD NETWORK
NFPA 70 HDBK CD SET

Save when you order both the NEC and the Handbook

National Electrical Code (NEC) Handbook & NFPA 70
NFPA 70 SET
NFPA 70 SET (LL)
NFPA 70 SET CD

Electrical Standard for Industrial Machinery
NFPA 79

NEC Pocket Guide - Residential - Commercial And Industrial
NFPA NECPG SET

Radio Technical Commission for Aeronautics, Inc. (RTCA)

Environmental Conditions and Test Procedures for Airborne Equipment
RTCA DO160

Software Considerations in Airborne Systems and Equipment Certification
RTCA DO178

Design Assurance Guidance for Airborne Electronic Hardware
RTCA DO254

JEDEC - Solid State Technology Association

Requirements for Handling Electrostatic-Discharge-Sensitive (ESDS) Devices
This standard establishes the minimum requirements for electrostatic discharge (ESD) control methods and materials used to protect electronic devices that are susceptible to damage or degradation from electrostatic discharge (ESD).
JEDEC JESD 625

Robotics Industries Association (RIA)

Industrial Robots and Robot Systems - Safety Requirements
RIA R15.06

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TELECOM/ELECTRO INDUSTRY TRENDS

The Institute of Electrical & Electronics Engineers, Inc. (IEEE)

Recommended Practice - General Principles for Temperature Limits in the Rating of Electrical Equipment and for the Evaluation of Electrical Insulation
IEEE 1

The Authoritative Dictionary of IEEE Standards Terms
IEEE 100

Graphic Symbols for Electrical and Electronics Diagrams (Including Reference Designation Class Designation Letters)
IEEE 315

Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems
IEEE 519

IEEE 802 Series LAN/MAN Standards
Available with or without drafts. Please see IEEE in the Telecommunications section for more information about the IEEE 802 Series.
IEEE 802 SERIES

National Electrical Safety Code (NESC)
Covers basic provisions for safeguarding of persons from hazards arising from the installation, operation or maintenance of conductors and equipment in electrical supply stations, as well as overhead and underground electric supply and communication lines and equipment.
IEEE C2
NESC CD

A Discussion of the National Electrical Safety Code (NESC)
The NESC Handbook pulls together facts, figures, and explanations that help you effectively implement the code.
NESC HANDBOOK

Underwriters Laboratories, Inc. (UL)

Enclosures for Electrical Equipment
UL 50

Industrial Control Equipment
UL 508

Printed - Wiring Boards
UL 796

Electrical Cables for Boats
UL 1426

Reference Standard for Electrical Wires, Cables, and Flexible Cords
UL 1581

Overheating Protection for Motors
UL 2111

Safety of Information Technology Equipment
UL 60950

Electrical Equipment for Labratory Use; Part 1; General Requirements
UL 61010A-1

British Standards Institution (BSI)

Electromagnetic Compatibility - Generic Emission Standard Part 1: Residential, Commercial and Light Industry
BS EN 50081-1

Electromagnetic Compatibility - Generic Emission Standard - Part 2: Industrial Environment
BS EN 50081-2

Specification for Limits and Methods of Measurement of Radio Disturbance Characteristics of Industrial, Scientific and Medical (ISM) Radio-Frequency Equipment
BS EN 55011

Sound and Television Broadcast Receivers and Associated Radio Disturbance Characteristics - Limits and Methods of Measurement
BS EN 55013

Information Technology Equipment - Radio Disturbance Characteristics - Limits and Methods of Measurement
BS EN 55022

Electromagnetic Compatibility (EMC) - Part 3: Limits - Section 2: Limits for Harmonic Current Emissions (Equipment Input Current Less Than/Equal to 16 a Per Phase)
BS EN 61000-3-2

Electromagnetic Compatibility (EMC) - Part 4-2: Testing and Measurement Techniques - Electrostatic Discharge Immunity Test
BS EN 61000-4-2

Electromagnetic Compatibility (EMC) - Part 4-5: Testing and Measurement Techniques - Surge Immunity Test
BS EN 61000-4-5

Electromagnetic Compatibility (EMC) - Part 6-2: Generic Standards Immunity for Industrial Environments
BS EN 61000-6-2

Electrical Equipment for Measurement, Control, and Laboratory Use - EMC Requirements
BS EN 61326

EMF-EFI Control Inc.

EMC 1999 Encyclopedia: Telecom and Computer Encyclopedia Handbook
The EMC Encyclopedia is a valuable reference for technical professionals worldwide. This comprehensive tool provides easy access to: numerous terms, designations, formulas, design diagnoses and case histories, illustrations of the terms in the form of drawings, sketches, charts, graphs and photographs, definitions and interpretations for units, terms, math models, tutorials, problem solutions, standards, and regulations. The 624-page 1999 edition is hardbound in a 7in.x10in. (18cmx25cm) dictionary-size format. Each annual edition is completely updated and expanded. A companion CD-ROM product has been developed to enhance the 1999 EMC Encyclopedia. It provides instant search and retrieval capabilities, eliminating the frustration which often accompanies the use of a standard dictionary. With enhanced cross-referencing, this version provides instant access to all EMC words and terminology.
EMC ENCYCLOPEDIA

GM Worldwide (GMW)

General Specification for Electrical/Electronic Components and Subsystems - Electromagnetic Compatibility - Requirement Part
GMW3097

European Council/Commission Legislative Documents

Council Directive on the Approximation of the Laws of the Member States Relating to Electromagnetic Compatibility
EEC/89/336

Telecommunications Terminal Equipment, Including the Mutual Recognition of their Conformity
EEC/91/263

Electromagnetic Compatibility
See Also EEC/89/336 & EEC/91/263
EEC/92/31

General Motors Worldwide (GMW)

General Specification for Vehicles - Electromagnetic Compatibility (EMC) - Requirement Part
GMW3091

General Specification for Electrical/Electronic Components and Subsystems - Electromagnetic Compatibility - Requirement Part
GMW3097

General Specification for Electrical/Electronic Components and Subsystems - Electromagnetic Compatibility - Verification Part
GMW3100

General Specification for Electrical/Electronic Components and Subsystems - Electromagnetic Compatibility - Global EMC Component/Subsystem Validation Acceptance Process - Requirement Part
GMW3103

GM Electromagnetic Compatibility Set
Includes; GM9100P, GM9105P, GM9107P, GM9108P, GM9109P, GM9112P, GM9113P, GM9114P, GM9115P, GM9116P, GM9117P, GM9119P, and GM9120P.
GM EMC

International Electrotechnical Commission (IEC)

Electromagnetic Compatibility (EMC) Part 3-2: Limits - Limits for Harmonic Current Emissions (Equipment Input Current Less than or Equal to 16 a per Phase
IEC 61000-3-2

Section 1: Testing and Measurement Techniques - Overview of IEC 61000-4 Series
IEC 61000-4-1

Section 4: Electrical Fast Transient/Burst Immunity Test. Basic EMC Publication
IEC 61000-4-4

International Electrotechnical Commission (IEC)

Industrial, Scientific and Medical (ISM) Radio-Frequency Equipment Electromagnetic Disturbance Characteristics - Limits and Methods of Measurement
CISPR 11

Specification for Radio Disturbance and Immunity Measuring Apparatus and Methods - Part 1: Radio Disturbance and Immunity Measuring Apparatus
CISPR 16-1

Specification for Radio Disturbance and Immunity Measuring Apparatus and Methods - Part 2: Methods of Measurement of Disturbances and Immunity
CISPR 16-2

Specification for Radio Disturbance and Immunity Measuring Apparatus and Methods - Part 4: Uncertainty in EMC Measurements
CISPR 16-4

Electromagnetic Compatibility (EMC) - Part 1: General; Section 1: Application and Interpretation of Fundamental Definitions and Terms
IEC 61000-1-1

Electromagnetic Compatibility (EMC) Part 3-2: Limits - Limits for Harmonic Current Emissions (Equipment Input Current Less than or Equal to 16 a per Phase
IEC 61000-3-2

IEC Electromagnetic Compatibility (EMC)

IEC Electromagnetic Compatibility (EMC) Set
Set Includes IEC 61000-4-1 through 61000-4-10.
IEC EMC SET

Section 1: Testing and Measurement Techniques - Overview of IEC 61000-4 Series
IEC 61000-4-1

Section 2: Testing and Measurement Techniques - Electrostatic Discharge Immunity Test
IEC 61000-4-2

Section 3: Testing and Measurement Techniques - Radiated, Radio-Frequency. Electromagnetic Field Immunity Test
IEC 61000-4-3

Section 4: Electrical Fast Transient/Burst Immunity Test. Basic EMC Publication
IEC 61000-4-4

Section 5: Surge Immunity Test
IEC 61000-4-5

Military Standards

Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment
MIL-STD-461

Electromagnetic Environmental Effects Requirements for Systems
MIL-STD-464

SAE International (SAE)

Electromagnetic Compatibility Measurement Procedures for Vehicle Components - Part 13 - Immunity to Electrostatic Discharge
SAE J1113-13

Electromagnetic Compatibility Measurement Procedures for Integrated Circuits - Integrated Circuit EMC Measurement
SAE J1752-1

Function Performance Status Classification for EMC Susceptibility Testing of Automotive Electronic and Electrical Devices
SAE J1812

SIMCOM

The European Union Electromagnetic Compatibility Directive: 89/336/EEC - A Technical Professional's Guidance Manual for Legal European Trade
Please see page 31 for a complete description.
SIMCOM ELECTROMAGNETIC

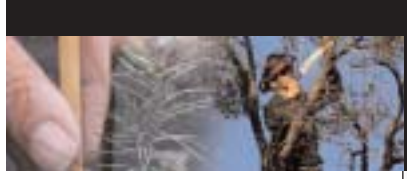
The Institute of Electrical & Electronics Engineers, Inc. (IEEE)

Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 KHz to 40 GHz
ANSI C63.4

Electromagnetic Compatibility Radiated Emission Measurements in Electromagnetic Interference (EMI) Control Calibration of Antennas
IEEE C63.5

American National Standard for Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids
IEEE C63.19

Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave
IEEE C95.3



Acoustical Society of America (ASA)

Sound Level Meters

This standard includes an optional impulse exponential-time-averaging characteristic, inclusion of an optional peak characteristics, more rigorous definition of the dynamic characteristics for the Fast and Slow exponential-time-averaging, increase in the crest factor requirement to ten for type 1 instruments, specification of a type 0 laboratory instrument with generally smaller tolerance limits than those previously specified for type 1, and deletion of the type 3 survey instrument.
ANSI S1.4

Octave Band and Fractional-Octave Band Analog and Digital Filters

This standard provides performance requirements for fractional-octave-band bandpass filters, including, in particular, octave-band and one-third-octave-band filters. Basic requirements are given by equations with selected empirical constants to establish limits on the required performance. The requirements are applicable to passive or active analog filters that operate on continuous-time signals, to analog and digital filters that operate on discrete-time signals and to fractional-octave-band analyses synthesized from narrow-band spectral components.
ANSI S1.11

Methods for the Measurement of Sound Pressure Levels in Air

This standard specifies requirements and describes procedures for the measurement of sound levels in air at a single point in space. These requirements and procedures apply primarily to measurements performed indoors but may be utilized in outdoor measurements under specified conditions.
ANSI S1.13

Balance Quality Requirements of Rigid Rotors - Part 1: Determination of Permissible Residual Unbalance

ANSI S2.19

Graphical Presentation of the Complex Modulus of Viscoelastic Materials

ANSI S2.24

Methods for the Measurement & Designation of Noise Emitted by Computer and Business Equipment

ANSI S12.10

American National Standard Precision Methods for the Determination of Sound Power Levels of Broad-Band Noise Sources in Reverberation Rooms

ANSI S12.31

American National Standard Precision Methods for the Determination of Sound Power Levels of Discrete-Frequency and Narrow-Band Noise Sources in Reverberation Rooms

ANSI S12.32

American National Standard Survey Methods for the Determination of Sound Power Levels of Noise Source

ANSI S12.35

American Conference of Governmental Industrial Hygienists (ACGIH)

Global Engimeering Documents® offers fast and complete access to standards and publications published by the American Conference of Governmental Industrial Hygienists (ACGIH). Call Global for a complete listing.

2000 TLVs and BEIs: Threshold Limit Valves for Chemical Substances and Physical Agents

Please see page 124 for a complete description.
ACGIH BIOLOGICAL EXPOSURE

Occupational Biomechanics

ACGIH BIOMECHANICS

Personal Protective Equipment Pocket Guide

ACGIH EQUIPMENT GUIDE

Occupational Health & Safety

Major topic areas include: The Occupational Safety and Health Team; Managing the Health Safety Process; Managing Human Resources; Legal/Ethical Considerations; and Outlook for Occupational Health and Safety.
ACGIH HEALTH

Material Safety Data Sheets (MSDS), CD-ROM

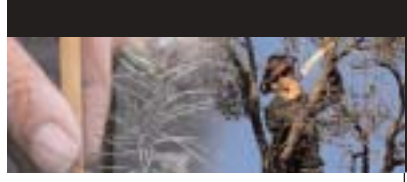
ACGIH MSDS CD-ROM

American Petroleum Institute (API)

API Environmental and Safety CD-ROM

Call for quote

The API Environmental and Safety product, includes manuals, training materials, standards, specifications, recommended practices, bulletins, and other publications. These documents address equipment and materials, offshore production, drilling, transportation, structural pipe, nomenclature, valves, environmental effects, fuel volatility, oil spills, photochemical smog, air quality, motor gasoline, study of motor fuel, gaseous motor fuels, exhaust gas, the Clean Air Act, emission control, beach protection study, and environmental research reports. Updated every 60 days.
IHS ES594



American Petroleum Institute (API)

API Health, Environment and Sciences Department (HESD) Publications

API conducts health and environmental research programs on a variety of topics of interest to the petroleum industry. These programs result in software or reports providing information to assist companies in addressing issues such as: a) Health effects of petroleum products; b) Effects of fuel changes on vehicle emissions; c) Remediation of contaminated sites; d) Storage tank and pipeline leak detection; and e) Techniques to estimate facility air emissions. In addition, these programs foster the exchange of scientific and technical information among industry engineers and scientists as well as other professionals, governmental and industrial organizations. Both current and historical HESD publications from API are available from Global.

Call for quote

API DR REPORTS

API Environmental and Safety CD-ROM

The API Environmental and Safety product, includes manuals, training materials, standards, specifications, recommended practices, bulletins, and other publications. These documents address equipment and materials, offshore production, drilling, transportation, structural pipe, nomenclature, valves, environmental effects, fuel volatility, oil spills, photochemical smog, air quality, motor gasoline, study of motor fuel, gaseous motor fuels, exhaust gas, the Clean Air Act, emission control, beach protection study, and environmental research reports. Updated every 60 days.

Call for quote

IHS ES594

Environmental Guidance Document: Waste Management in Exploration and Production Operations

Includes recommendations for the environmentally sound management of solid waste resulting from the exploration and production of oil and gas. Guidance is provided for the management of drilling fluids, produced waters, and other wastes associated with the operation of gas plants, field facilities, drilling, and workover.

API E5

Model Environmental, Health and Safety (EHS) Management System and Guidance Document

This document is intended to be used as a voluntary tool to assist companies interested in developing an EHS management system or enhancing an existing system. The model, which applies a quality systems approach to managing EHS activities, focuses on people and procedures by pulling together company EHS policies, legal requirements, and business strategies into a set of company or facility expectations or requirements.

API PUBL 9100

Development of a Safety and Environmental Management Program for Outer Continental Shelf (OCS) Operations and Facilities

Provides guidance for use in preparing safety and environmental management programs (SEMP) for oil, gas, and sulphur operations and facilities located on the outer continental shelf (OCS). These guidelines are applicable to well drilling, servicing, and production; and pipeline facilities and operations that have the potential for creating a safety or environmental hazard at OCS platform sites. Eleven major program elements are included for application to these facilities and operations. Identification and management of safety and environmental hazards are addressed in design, construction, startup, operation, inspection, and maintenance of new, existing, and modified facilities.

API RP 75

Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks

This recommended practice supplements the requirements of ANSI/API Standard 2015, Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks, Sixth Edition. This RP provides guidance and information on the specific aspects of tank cleaning, in order to assist employers (owners/operators and contractors) to conduct safe tank cleaning operations in accordance with the requirements of ANSI/API Standard 2015.

API RP 2016

Safe Entry and Cleaning of Petroleum Storage Tanks

This standard provides safety practices for preparing, emptying, isolating, ventilating, atmospheric testing, cleaning, entry, hot work, and recommissioning activities in, on, and around atmospheric and low-pressure (up to and including 15 psig) aboveground storage tanks that have contained flammable, combustible, or toxic materials. This standard directs the user from decommissioning (removal from service) through recommissioning (return to service). This standard applies to stationary tanks used in all sectors of the petroleum and petrochemical plants, and terminals.

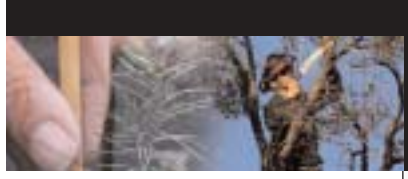
API STD 2015

American Society for Quality (ASQ)

Guide for Quality Control Charts - Control Chart Method of Analyzing Data - Control Chart Method of Controlling Quality During Production

ANSI/ASQC B1-1996: This is a guide for handling problems concerning the economic control of quality of materials and manufactured products, with particular reference to methods of collecting, arranging, and analyzing inspection. ANSI/ASQC B2-1996: This guide gives particular reference to quality data resulting from inspections and tests of materials and manufactured products. ANSI/ASQC B3-1996: This outlines the control chart method of identifying and eliminating causes of trouble in repetitive production processes in order to reduce variation in the quality of manufactured products and materials.

ASQ B1-B3



American Society for Quality (ASQ)

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ASQ B1-B3

Identifying Environmental Aspects and Impacts

ASQ H1009

ISO 14001 Certification: Environmental Management Systems

ASQ P601

Environmental Management Systems - Specifications with Guidance for Use

ASQ T65

American Society of Safety Engineers (ASSE)

Criteria for Accepted Practices in Safety, Health, and Environmental Training

ANSI Z490.1

ASTM International (ASTM)

Please see the Annual Book of ASTM Standards section for individual Water Environmental Technology volume listings.

Annual Book of ASTM Standards

Water and Environmental Technology

ASTM SECTION 11

Code of Federal Regulations (CFR)

The complete multi-volume collection of the CFR and Index are available from Global.

Protection of Environment

Please see page 156 for a complete description.

40 CFR 1-49

European Telecommunications Standards Institute (ETSI)

Equipment Engineering (EE); Environmental Conditions and Environmental Test for Telecommunications Equipment

Part 1-0: Classification of Environmental Conditions Introduction

ETS 300 019-1-0

Part 1-1: Classification of Environmental Conditions Storage

ETS 300 019-1-1

Part 1-2: Classification of Environmental Conditions Transportation

ETS 300 019-1-2

Part 1-3: Classification of Environmental Conditions Stationary use at Weather Protected Locations

ETS 300 019-1-3

Part 2-3: Specification of Environmental Tests T 3.1 to T 3.5 Stationary use at Weather Protected Locations

ETS 300 019-2-3

Part 2-4: Specification of Environmental Tests T 4.1 and T 4.1E Stationary use at Non-Weather Protected Locations

ETS 300 019-2-4

International Electrotechnical Commission (IEC)

Environmental Testing Part 1: General and Guidance

IEC 60068-1

Environmental Testing Part 2: Tests - Tests A: Cold

IEC 60068-2-1

Basic Environmental Testing Procedures - Part 2: Tests - Tests B: Dry Heat

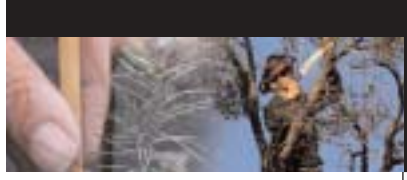
IEC 60068-2-2

Environmental Testing - Part 2: Tests - Test FC: Vibration [Sinusoidal]

IEC 60068-2-6

Basic Environmental Testing Procedures Part 2: Tests Test N: Change of Temperature

IEC 60068-2-14



International Organization for Standardization (ISO)

ISO 14000 Series on Environmental Management
The ISO 14000 series is designed to guide businesses through the various steps of adopting a responsible environmental management system. Although ISO 14000 is voluntary, more and more companies are expected to be contractually or legally obligated to obtain certification.
ISO 14000 SERIES

Cleanrooms and Associated Controlled Environments Set
Includes : ISO 14644-1, ISO 14644-2, ISO 14644-4, ISO DIS 14644-5, ISO DIS 14644-6, and ISO DIS 14644-7.
ISO 14644 SET

International Organization for Standardization (ISO)

ISO 14000 Series on Environmental Management

ISO Standards - ISO 14000 - Environmental Management
The ISO 14000 Compendium, is a series of international, voluntary environmental management standards. Developed under ISO Technical Committee 207, the 1400 series of standards address the following aspects of environmental management: (1) Environmental Management Systems (EMS), (2) Environmental Labels and Declarations (EL), (3) Life Cycle Assessment (LCA), (4) Environmental Auditing & Related Investigations (EA&RI), (5) Enviromental Performance Evaluation (EPE), and (6) The Terms and Definitions (T&D). The benefits of the ISO 14000 Compendium are as follows: (1) Assuring customers of commitment to demonstrable environmental management, (2) Obtaining insurance at reasonable cost, (3) Meeting vendor certification criteria, (4) Reducing incidents that result in liability, (5) Demonstrating reasonable care, (6) Conserving input materials and energy, (7) Facilitating the attainment of permits and authorizations, (8) Fostering development and sharing environmental solutions, and (9) Improving industry-government relations.
ISO 14000 COMPENDIUM

Includes ISO Guide 64, ISO 14001, 14004, 14010, 14011, 14012, DIS 14015, 14020, 14021, 14024, TR 14025, 14031, TR 14032, 14040, 14041, 14042, 14043, TR 14049, 14050, and TR 14061.

ISO 14000 Series on Environmental Management
The ISO 14000 series is designed to guide businesses through the various steps of adopting a responsible environmental management system. Although ISO 14000 is voluntary, more and more companies are expected to be contractually or legally obligated to obtain certification.
ISO 14000 SERIES

Environmental Management Systems - Specification with Guidance for Use
Gives requirements for an environmental management system, to enable an organization to develope a policy and objectives taking into account legislative requirements and information about significant environmental impacts.
ISO 14001

Guide to Environmental Management Systems - General Guidelines on Principles, Systems, and Supporting Techniques
Contains guidelines on the development and implementation of environmental management systems and principles, and their coordination with other management systems. The guidelines are intended for use as a voluntary, internal management tool and not to be used as EMS certification criteria.
ISO 14004

Guidelines for Quality and/or Environmental Management Systems Auditing
ISO 19011:2002 provides guidance on the principles of auditing, managing audit programs, conducting quality management system audits and environmental management system audits, as well as guidance on the competance of quality and environmental management system auditors. It is applicable to all organizations needing to conduct internal or external audits of quaility and/or environmwntal management systems or to manage an audit program. This standard now replaces ISO 14011 and ISO 14012.
ISO 14010

Guidelines for Quality and/or Environmental Management Systems Auditing
Provides you with guidelines for verifying the system's ability to achieve defined quality objectives. You can use this standard internally or for auditing your suppliers. This standard now replaces ISO 14010, ISO 14011, and ISO 14012.
ISO 19011

Environmental Labels and Declarations - General Principles
This international standard establishes guiding principles for the development and use of environmental labels and declarations.
ISO 14020

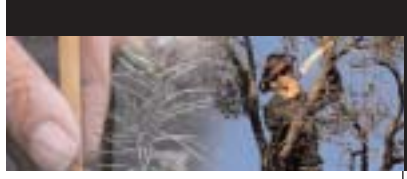
Environmental Labels and Declarations - Self Declared - Environmental Claims (Type II Environmental Labeling)
ISO 14021

Environmental Labels and Declarations - Type 1 Environmental Labeling - Principles and Procedures
ISO 14024

Environmental Management - Environmental Performance Evaluation - Guidelines
ISO 14031

Environmental Management - Life Cycle Assessment - Principles and Framework
ISO 14040

Environmental Management - Life Cycle Assessment - Goal and Scope Definition and Inventory Analysis
ISO 14041



Environmental Management - Life Cycle Assessment - Life Cycle Impact Assessment
ISO 14042

Environmental Management - Life Cycle Assessment - Life Cycle Interpretation
ISO 14043

Environmental Management - Vocabulary
(Bilingual)
ISO 14050

Guide for the Inclusion of Environmental Aspects in Product Standards
ISO Guide 64

ISO 14000 Handbook

This publication is a practical, comprehensive guide to ISO 14000 standards implementation and environmental management system certification. It includes an ISO 14000 series overview, discusses preparing, planning and implementing ISO 14001, and gives different implementation approaches. It also includes the actual text of ISO/DIS 14001 and 14004.
ISO 14000 HDBK (ASQ)

International Environmental Risk Management: ISO 14000 and the Systems Approach

This book gives an extensive analysis of practical applications of ISO 14000 and environmental compliance management systems to help define and implement an environmental risk reduction strategy to your best advantage. It offers a mixture of technical engineering advice, legal guidance, and common sense business acumen. The essentials of the standards are explained, as well as how they are being developed and what implications they present. Cost-benefit analyses, integration strategies, business risk control measures, and step-by-step guidance on achieving third-party certification are also included.
RISK MANAGEMENT

Cleanrooms and Associated Controlled Environments

Cleanrooms and Associated Controlled Environments Set
Includes : ISO 14644-1, ISO 14644-2, ISO 14644-4, ISO DIS 14644-5, ISO DIS 14644-6, and ISO DIS 14644-7.
ISO 14644 SET

Part 1: Classification of Air Cleanliness
ISO 14644-1

Part 2: Specifications for Testing and Monitoring to Prove Continued Compliance with ISO 14644-1
ISO 14644-2

Part 4: Design, Construction and Start-Up
ISO 14644-4

Part 5: Operations
ISO DIS 14644-5

Part 7: Separative Enclosures (Clean Air Hoods, Gloveboxes, Isolators, Mini-Environments)
ISO DIS 14644-7

Japanese Standards Association (JSA)

Environmental Technology Handbook
JIS ENVIRONMENTAL HDBK

Basic Environmental Testing Procedures - Part 2: Tests - Test Ka: Salt Mist
JIS C 0023

National Electrical Manufacturers Association (NEMA)

NEMA
Setting Standards for Excellence

Z535 Standards for Safety Signs and Colors Set
Includes ANSI Z535.1 through ANSI Z535.5.
ANSI Z535 SERIES
ANSI Z535 SERIES CD

Safety Color Code
Please see page 33 for a complete description.
ANSI Z535.1

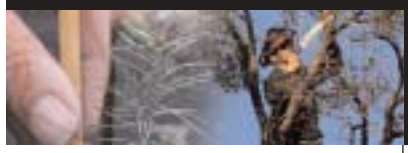
Environmental and Facility Safety Signs
Please see page 33 for a complete description.
ANSI Z535.2

Criteria for Safety Symbols
Please see page 33 for a complete description.
ANSI Z535.3

Product Safety Sign and Label
Please see page 33 for a complete description.
ANSI Z535.4

Accident Prevention Tags
Please see page 33 for a complete description.
ANSI Z535.5

Safety Color Chart
Please see page 33 for a complete description.
ANSI Z535 COLOR CHART



The Institute of Electrical & Electronics Engineers, Inc. (IEEE)

Guide for the Design, Construction, and Operation of Safe and Reliable Substations for Environmental Acceptance
IEEE 1127

Microprocessor Environmental Specifications for Computer Modules
IEEE 1156.1

Standard for Environmental Specifications for Computer Systems
IEEE 1156.2

Environmental Specifications for Spaceborne Computer Modules
IEEE 1156.4

Common Mezzanine Card (CMC) Family
Now contains IEEE 1386.1.
IEEE 1386

American Petroleum Institute (API)

Recommended Practice for Fire Prevention and Control on Open Type Offshore Production Platforms
API RP 14G presents a standardized method to design, install, and test surface safety systems on offshore production platforms and presents recommendations for minimizing the likelihood of an accidental fire, and for designing, inspecting, and maintaining fire control systems.
API RP 14G

American Petroleum Institute (API)

Recommended Practice for Fire Prevention and Control on Open Type Offshore Production Platforms
API RP 14G presents a standardized method to design, install, and test surface safety systems on offshore production platforms and presents recommendations for minimizing the likelihood of an accidental fire, and for designing, inspecting, and maintaining fire control systems.
API RP 14G

Fire Protection in Refineries
The purpose of this publication is to provide a better understanding of the fire protection problems and the steps needed to promote the safe storage, handling, and processing of petroleum and petroleum products in refineries and the safe shipment of these products.
API RP 2001

Interim Study - Prevention and Suppression of Fires in Large Aboveground Atmospheric Storage Tanks
The purpose of this publication is to provide an understanding of the fire prevention and suppression issues relating to the storage of flammable and combustible liquids in large aboveground atmospheric storage tanks.
API PUBL 2021A

Application of Fixed Water Spray Systems for Fire Protection in the Petroleum Industry
This publication provides guidance on the design of water spray systems for fire protection in the petroleum industry, including recommended uses and suggested application rates.
API PUBL 2030

Fire-Protection Considerations for the Design and Operation of Liquefied Petroleum Gas (LPG) Storage Facilities
This publication supplements API Standard 2510 and addresses the design, operation, and maintenance of liquefied petroleum gas (LPG) storage facilities from the standpoint of prevention and control of releases, fire protection design, and fire control measures.
API PUBL 2510A

British Standards Institution (BSI)

Fire Tests on Building Materials and Structures - Part 7: Method of Test to Determine the Classification of the Surface Spread of Flame of Products
BS 476 P7

Fire Tests on Building Materials and Structures Part 21: Methods for Determination of the Fire Resistance of Loadbearing Elements of Construction
BS 476 P21

Fire Tests on Building Materials and Structures Part 22: Methods for Determination of the Fire Resistance of Non-Loadbearing Elements of Construction
BS 476 P22

Fire Detection and Fire Alarm Systems
Parts 1, 2, 3, 4, 5, 7, 10, and 11
BS EN 54 (Part 1 through Part 11)

Connectors, Electrical, Circular, Coupled by Threaded Ring, Fire-Resistant or Non Fire-Resistant, Operating Temperatures 175 Degrees C Continuous, 200 Degrees C Continuous, 260 Degrees C Peak Part 1: Technical Specification
BS EN 2997-1

Fixed Firefighting Systems - Components for Sprinkler and Water Spray Systems - Part 1: Sprinklers
BS EN 12259-1

Alarm Systems - Part 4. Electromagnetic Compatibility - Product Family Standard: Immunity Requirements for Components of Fire, Intruder, and Social Alarm Systems
BS EN 50130-4

International Code Council (ICC)

International Fire Code
Topics addressed include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, hazardous materials storage and use, and fire-safety requirements for new and existing buildings and premises.
ICC IFC

FM Approvals

FM Approvals standards are used to test products for the prevention or minimization of industrial property loss. They take into account global technology and the constantly changing needs of industry. Customers use the FM Approvals diamond as a marketing tool and a mark of excellence for their products. This indicates quality to potential buyers.

Fire Service Water Control Valves (OS&Y and NRS Type Gate Valves)
FM APPROVAL 1120/1130

Quick Opening Valves 1/4 Inch Through 2 Inch Nominal Size
FM APPROVAL 1140

Trim Water Pressure Relief Valves 1/4 Inch Through 2-1/2 Inch Nominal Size
Criteria for trim water pressure relief valves for use in valve trim, and in grided fire protection wet sprinkler systems.
FM APPROVAL 1359

Water Pressure Relief Valves
FM APPROVAL 1361

Fire Hydrant (Dry Barrel Type) for Private Fire Services
Traffic and Non-Traffic Styles
FM APPROVAL 1510

Polyvinyl Chloride (PVC Pipe) and Fittings for Underground Fire Protection Service
FM APPROVAL 1612

Plastic Pipe and Fittings for Automatic Sprinkler Systems
FM APPROVAL 1635

Automatic Sprinklers for Fire Protection
FM APPROVAL 2000

Fire Hose
Requirements for 1-1/2, 1-3/4, 2 and 2-1/2 in. (38, 44, 51, and 65 mm) Single-Jacket Occupant-Use Hose and Single-Jacket, Double-Jacket and Covered Lined Fire Hose; and 3 in. (76 mm) Single-Jacket, Double, and Covered Lined Fire Hose.
FM APPROVAL 2111

Central Station Service for Fire Alarms and Protective Equipment Supervision
FM APPROVAL 3011

Radiant Energy-Sensing Fire Detectors for Automatic Fire Alarm Signaling
FM APPROVAL 3260

Explosion Suppression Systems
FM APPROVAL 5700

Liquefied Petroleum Gas Vaporizers, Gas-Air Mixers and Vaporizer-Mixers
FM APPROVAL 7151, 7156 & 7157

Earthquake Actuated Safety Devices
Sets performance requirements for earthquake actuated devices designed to react to a pre-determined minimum level(s) of seismic disturbance. These devices – including but not limited to fuel gas valves, valve actuators, and electrical or pneumatic switches - are used to shut off fuel supply lines, activate or deactivate other types of supply lines, and activate or deactivate electrical or pneumatic circuits.
FM APPROVAL 7431

Combustion Safeguards and Flame Sensing Systems
FM APPROVAL 7610

International Organization for Standardization (ISO)

Fire-Resistance Tests - Elements of Building Construction - Part 1: General Requirements
ISO 834-1

Fire Protection - Automatic Sprinkler Systems - Part 1: Requirements and Test Methods for Sprinklers
ISO 6182-1

Fire Protection - Fire Extinguishing Media - Halogenated Hydro-Carbons - Part 1: Specifications for Halon 1211 and Halon 1301
ISO 7201-1

Fire Tests - Full-Scale Room Test for Surface Products
ISO 9705

International Telecommunications Union (ITU)

Fire Protection
ITU-T L.22

Series L: Construction, Installation and Protection of Cables and Other Elements of Outside Plant - Protection Devices for Through - Cable Penetrations of Fire - Sector partitions
ITU-T L.32

Military Specifications

Fire Protection for Facilities Engineering, Design, and Construction
MIL-HDBK-1008

National Fire Protection Association (NFPA)

National Electrical Code (NEC)
Please see page 39 for a complete description.
NFPA 70
NFPA 70 (LL)
NFPA 70 CD

National Electrical Code (NEC) - Codigo Electrico Nacional
Please see page 39 for a complete description.
NFPA 70 SPANISH

National Electrical Code (NEC) Handbook & NFPA 70
Please see page 39 for a complete description.
NFPA 70 SET
NFPA 70 SET (LL)

National Electrical Code Handbook & NFPA 70 in Spanish
Please see page 39 for a complete description.
NFPA 70 SET SPANISH

National Electrical Manufacturers Association (NEMA)

Training Manual on Fire Alarm Systems
Provides technical information on basic fire alarm systems in common usage. (Replaces NEMA Standards Pub. SB 4.)
NEMA TRAINING MANUAL

National Electrical Manufacturers Association (NEMA)

Guide to Proper Use of Smoke Detectors in Duct Applications
Provides much needed information concerning the proper use of smoke detectors in duct applications.
NEMA GUIDE - DUCT

Guide for Proper Use of System Smoke Detectors
Provides information concerning the applications of smoke detectors used in conjunction with fire alarm systems. Basic principles to be considered are outlined as well as operating characteristics of detectors and environmental factors that may either aid or prevent their operations.
NEMA GUIDE - SYSTEM

Guide to Code Requirements for Fire Alarm and Detection Systems
Outlines and compares the administrative and technical requirements for installation of fire protective signaling and detection systems in all 50 states and various major cites across the U.S. Provides information on how the regulations are promulgated and applied; and who is responsible for these activies.
NEMA GUIDE TO CODE
NEMA GUIDE TO CODE CD
NEMA GUIDE TO CODE BULK

Training Manual on Fire Alarm Systems
Provides technical information on basic fire alarm systems in common usage. (Replaces NEMA Standards Pub. SB 4.)
NEMA TRAINING MANUAL

National Fire Protection Association (NFPA)

Fire Prevention Code
NFPA 1

Installation of Sprinkler Systems
NFPA 13

Standard for the Installation of Stationary Pumps for Fire Protection
NFPA 20

Flammable and Combustible Liquids Code
NFPA 30

National Fire Alarm Code
NFPA 72

Fire Protection Handbook
NFPA FPH

Fire Protection Handbook - Manual De Proteccion Contra Incendios
NFPA FPH SPANISH

Fire Protection Systems- Inspection, Test & Maintenance Manual
NFPA FPS

Fire Protection Systems, Inspection Test Maintenance Manual Sistemas De Proteccion Contra Incendios Manual De Inspeccion, Pruebas Y Mantenimiento ***Copyright Date 1992***
NFPA FPS SPANISH

Underwriters Laboratories, Inc. (UL)

Fire Tests of Building Construction and Materials
UL 263

Smoke Detectors for Fire Protective Signaling Systems
UL 268

Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables
UL 1685

American Gear Manufacturers Association (AGMA)

Gear Classification and Inspection Handbook, Tolerances and Measuring Methods for Unassembled Spur and Helical Gears (Including Metric Equivalents)
Correlates gear quality levels with gear tooth tolerances. Provides information on manufacturing procedures, master gears, measuring methods, and practices. Partial replacement of AGMA 390.03.
AGMA 2000

Bevel Gear Classification, Tolerances, and Measuring Methods
Correlates gear accuracy grades with gear tooth tolerances and provides information on manufacturing practices as well as gear measuring methods and practices. Annex material provides guidance on specifying an accuracy grade and information on additional methods of gear inspection.
AGMA 2009

AGMA 2001 Gear Set
A comprehensive set of gear standards (24) including related ASTM and SAE standards.
AGMA 2001 SET

Geometry Factors for Determining the Pitting Resistance and Bending Strength of Spur, Helical and Herringbone Gear Teeth
Gives the equations for calculating the pitting resistance geometry factor, I, for external and internal spur and helical gears, and the bending strength geometry factor, J, for external spur and helical gears that are generated by rack-type tools (hobs, rack cutters or generating grinding wheels) or pinion-type tools (shaper cutters). Includes charts which provide geometry factors, I and J, for a range of typical gear sets and tooth forms.
AGMA 908

American Gear Manufacturers Association (AGMA)

Global Engineering Documents®, the retail arm of IHS, and AGMA have teamed together to provide a wide variety of services to the gear industry and its customers. AGMA is a voluntary association with direct interest in the design, manufacture and application of gears and flexible couplings. It was founded in response to market demand for standardized gear products.

Geometry Factors for Determining the Pitting Resistance and Bending Strength of Spur, Helical and Herringbone Gear Teeth
Gives the equations for calculating the pitting resistance geometry factor, I, for external and internal spur and helical gears, and the bending strength geometry factor, J, for external spur and helical gears that are generated by rack-type tools (hobs, rack cutters or generating grinding wheels) or pinion-type tools (shaper cutters). Includes charts which provide geometry factors, I and J, for a range of typical gear sets and tooth forms.
AGMA 908

Tooth Proportions for Fine - Pitch Spur and Helical Gearing
Includes spur and helical gearing of 20 through 120 diametral pitch with tooth proportions of 20 degree pressure angle and having 7 or more teeth. Tooth proportions shown may also be suitable for gear designs of finer than 120 diametral pitch.
AGMA 1003

Appearance of Gear Teeth - Terminology of Wear and Failure
This standard provides nomenclature for general modes of gear tooth wear and failure. It classifies, identifies, and describes the most common types of failure and provides information which will, in many cases, enable the user to identify failure modes and evaluate the degree of progression of wear.
AGMA 1010

Gear Nomenclature, Definitions of Terms with Symbols
Provides the agreed upon definitions and usage for terms, symbols and abbreviations used by the gear industry, as well as terms commonly used in gear load rating. Incorporates terms from AGMA 112.05 and AGMA 116.01.
AGMA 1012

Gear Classification and Inspection Handbook, Tolerances and Measuring Methods for Unassembled Spur and Helical Gears (Including Metric Equivalents)
Correlates gear quality levels with gear tooth tolerances. Provides information on manufacturing procedures, master gears, measuring methods, and practices. Partial replacement of AGMA 390.03.
AGMA 2000

Fundamental Rating Factors and Calculation Methods for Involute Spur and Helical Gear Teeth
Presents a comprehensive method for rating the pitting resistance and bending strength of spur and helical involute gear pairs. Includes detailed discussions of factors influencing gear survival and calculation methods.
AGMA 2001

AGMA 2001 Gear Set
A comprehensive set of gear standards (24) including related ASTM and SAE standards.
AGMA 2001 SET

Surface Temper Etch Inspection after Grinding
Explains the materials and procedures to determine and evaluate localized overheating on ground surfaces. Includes a system to describe and classify the indications produced during this inspection. Does not provide specific acceptance or rejection criteria.
AGMA 2007

Assembling Bevel Gears
Prepared expressly for the assembly man in the factory and the service man in the field. Each definition, explanation, and instruction is directed toward the physical appearance of the gears as they are inspected and assembled.
AGMA 2008

Bevel Gear Classification, Tolerances, and Measuring Methods
Correlates gear accuracy grades with gear tooth tolerances and provides information on manufacturing practices as well as gear measuring methods and practices. Annex material provides guidance on specifying an accuracy grade and information on additional methods of gear inspection.
AGMA 2009

Cylindrical Wormgearing Tolerance and Inspection Methods
This standard describes and defines variations that may occur in unassembled wormgearing. It displays measuring methods and practices, giving suitable warnings if a preferred probe cannot be used. The applicability of single or double flank composite testing is discussed, using a reference gear. Tooth thickness measurement is shown using direct measurement as well as the use of measurements over wires or pins. Equations for the maximum variations are given for the stated ranges, as a function of size, pitch and tolerance grade.
AGMA 2011

Specifications for Powder Metallurgy Gears
This standard defines the minimum detailed information to be included in the powder metallurgy gear specifications submitted by the gear purchaser to the gear producer. This information covers gear tooth geometry data, gear drawing specifications and gear material specifications.
AGMA 6008

Specification for High Speed Helical Gear Units
This standard includes design, lubrication, bearings, testing, and rating for single and double helical external tooth parallel shaft speed reducers or increasers.
AGMA 6011

American Petroleum Institute (API)

Rotor Repair
This recommended practice covers the minimum requirements for the inspection and repair of special purpose rotating equipment rotors, bearings, and couplings used in petroleum, chemical, and gas industry service.
API RP 687

American Petroleum Institute (API)

Rotor Repair
This recommended practice covers the minimum requirements for the inspection and repair of special purpose rotating equipment rotors, bearings, and couplings used in petroleum, chemical, and gas industry service.
API RP 687

Special - Purpose Gear Units for Petroleum, Chemical and Gas Industry Services
Covers the minimum requirements for special-purpose, enclosed, precision, single- and double-helical one- and two-stage speed increasers and reducers of parallel-shaft design for refinery services. Primarily intended for gears that are in continuous service without installed spare equipment.
API STD 613

Packaged, Integrally Geared, Centrifugal Air Compressors for Petroleum, Chemical and Gas Industry Services
Establishes the minimum requirements for constant-speed, packaged, integrally geared centrifugal air compressors, including their accessories. It may be applied for gas services other than air that are nonhazardous and non-toxic. This standard is not applicable to machines that develop a pressure rise of less than 0.35 bar (5.0 psi) above atmospheric pressure, which are classed as fans or blowers.
API STD 672

General - Purpose Gear Units for Petroleum, Chemical and Gas Industry Services
Covers the minimum requirements for general-purpose, enclosed single-and multi-stage gear units incorporating parallel-shaft helical and right angle spiral bevel gears for the petroleum, chemical, and gas industries. Gears manufactured according to this standard are limited to the following pitchline velocities: helical gears shall not exceed 60 meters per second (12,000 feet per minute) and spiral bevel gears shall not exceed 40 meters per second (8,000 feet per minute). This standard includes related lubricating systems, instrumentation, and other auxiliary equipment.
API STD 677

Deutsches Institut fur Normung, e.V. (DIN)

Power Transmission Elements 1. Standards on Gearing Terminology
DIN HDBK 106

Deutsches Institut fur Normung, e.V. (DIN)

Tolerances for Cylindrical Gear Teeth; Bases
DIN 3961

Tolerances for Cylindrical Gear Teeth; Tolerances for Tooth Trace Deviations
DIN 3962 P2

System of Gear Fits; Backlash, Tooth Thickness, Toler
DIN 3967

Power Transmission Elements 1. Standards on Gearing Terminology
DIN HDBK 106

Handbook of Practical Gear Design
A detailed, practical guide, and reference to gear technology. The design of all types of gears is covered, from those for small mechanisms to large industrial applications. Gear materials, manufacturing methods, and troubleshooting are also covered. The text is well illustrated with clear diagrams and photographs. The many tables provide needed reference data in a convenient form.
HANDBOOK OF PRACTICAL

International Organization for Standardization (ISO)

Cylindrical Gears - ISO System of Accuracy

Part 1: Definitions and Allowable Values of Deviations Relevant to Corresponding Flanks of Gear Teeth
ISO 1328-1

Part 2: Definitions and Allowable Values of Deviations Relevant to Radial Composite Deviations and Runout Information
ISO 1328-2

Calculation of Load Capacity of Spur and Helical Gears

Part 1: Basic Principles, Introduction and General Influence Factors
ISO 6336-1

Part 2: Calculation of Surface Durability (Pitting)
ISO 6336-2

Part 3: Calculation of Tooth Bending Strength
ISO 6336-3

Part 5: Strength and Quality of Materials
ISO 6336-5

MAAG Gear Book

MAAG Gear Book
Presents MAAG's know-how on the calculation and practice of gears, gear drives, toothed couplings, and synchronous clutch couplings. Includes calculation method for determining load capacity of high speed gears that is a modified approach to ISO 6336, parts 1-5. Includes 440 pages with illustrations.
MAAG GEAR BOOK

ASME International (ASME)

The American Society of Mechanical Engineers develops codes and standards for engineering professionals, industry, and government.

ASME Screw Threads

Unified Inch Screw Threads (UN & UNR Thread Form)
ASME B1.1

Gages and Gaging for Unified Inch Screw Threads
ANSI B1.2

Screw Thread Gaging Systems for Dimensional Acceptability - Inch and Metric Screw Threads (UN, UNR, UNJ, M, and MJ)
ASME B1.3M

Acme Screw Threads
ASME B1.5

Metric Screw Threads: M Profile
ASME B1.13M

ASME Valves, Fittings, Flanges, and Gaskets

Pipe Flanges & Flanged Fittings
Covers pressure-temperature ratings, materials, dimensions, tolerances, marking, testing, and methods of designating openings for pipe flanges and flanged fittings in sizes NPS 1/2 through NPS 24 and in rating Classes 150, 300, 400, 600, 900, 1500, and 2500. Flanges and flanged fittings may be cast, forged, or (for blind flanges and certain reducing flanges only) plate materials as listed in Table 1A. Requirements and recommendations regarding bolting and gaskets are also included.
ANSI B16.5

Factory-Made Wrought Steel Buttwelding Fittings
ASME B16.9

Face-to-Face and End-to-End Dimensions of Valves
ASME B16.10

Forged Fittings, Socket-Welding and Threaded
ASME B16.11

Valves - Flanged, Threaded, and Welding Ends
Applies to new valve construction and covers pressure-temperature ratings, dimensions, tolerances, materials, nondestructive examination requirements, testing, and marking for cast, forged, and fabricated flanged, threaded, and welding end, and wafer or flangeless valves of steel, nickel-base alloys, and other alloys.
ANSI B16.34

ASME Fasteners

Square and Hex Bolts and Screws Inch Series
ANSI B18.2.1

Square and Hex Nuts (Inch Series)
ANSI B18.2.2

Socket Cap Shoulder and Set Screws Hex and Spine Keys (Inch Series)
ASME B18.3

Tapered and Reduced Cross Section Retaining Rings (Inch Series)
ASME B18.27

Surface Texture (Surface Roughness, Waviness & Lay)
ANSI B46.1

ASTM International (ASTM)

Metals and Alloys in the Unified Numbering System (UNS)
The UNS 9th Edition contains more than 4,600 Metals and Alloy Designations - including 500 New and Revised since the 1993 edition. UNS designations include a description of the material, its chemical composition, and applicable cross-reference specifications from societies, trade associations and government. Each UNS designation consists of a single-letter prefix followed by five digits (for example S17400).
ASTM DS 56

ASTM International (ASTM)

ASTM publishes standards, specifications, tests, practices, guides and definitions for materials, products, systems and services. More than 9,000 ASTM standards and related information are used throughout the world and are available through Global.

Standard Specification for Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service
ASTM A 193/A 193M

Standard Specification for Carbon and Alloy Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both
ASTM A 194/A 194M

Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 KSI Minimum Tensile Strength
ASTM A 325

Standard Test Methods for Determining the Mechanical Properties of Externally and Internally Threaded Fasteners, Washers, and Rivets
ASTM F 606

Standard Specification for Roof and Rock Bolts and Accessories
ASTM F 432

ASTM DS 56

Metals and Alloys in the Unified Numbering System (UNS)
The UNS 9th Edition contains more than 4,600 Metals and Alloy Designations - including 500 New and Revised since the 1993 edition. UNS designations include a description of the material, its chemical composition, and applicable cross-reference specifications from societies, trade associations and government. Each UNS designation consists of a single-letter prefix followed by five digits (for example S17400).
ASTM DS 56
ASTM DS 56 CD

Fasteners; Rolling Element Bearings
ASTM 01.08
ASTM 01.08 CD

British Standards Institution (BSI)

Pipe Threads for Tubes and Fittings Where Pressure-Tight Joints are Made on the Threads (Metric Dimensions)
BS 21

Pipe Threads for Tubes & Fittings Where Pressure-Tight Joints are Not Made on the Threads (Metric Dimensions)
BS 2779

ISO Metric Screw Threads Principals & Basic Data
BS 3643 P1

Specification for Selected Limits of Size
BS 3643 P2

Deutsches Institut fur Normung, e.V. (DIN)

Fasteners 1: Dimensional Standards for Bolts and Screws
DIN HDBK 10

Fasteners 2: Standards for Pins, Rivets, Keys, Adjusting, and Retaining Rings
DIN HDBK 43

Standards for Screw Threads
DIN HDBK 45

Fasteners 3: Standards for Technical Conditions for Bolts, Screws, Nuts, and Washers
DIN HDBK 55

Fasteners 4: Dimensional Standards for Nuts and Accessories for Bolt/Nut Assemblies
DIN HDBK 140

Fasteners 5: Basic Standards
DIN HDBK 193

Hexagon Nuts, Style 1, with Metric Fine Pitch Thread Products Grades A and B
DIN EN 28673

Hexagon Socket Head Cap Screws
DIN EN ISO 4762

Plain Washers - Normal Series - Product Grade A
DIN EN ISO 7089

Encyclopedia of Threaded Fasteners

Written by Frank Jackson

Encyclopedia of Threaded Fasteners
ENCYCLOPEDIA OF THREADED

Fastener Act

Fastener Act (Contained in 15 CFR part 280)

Commerce and Foreign Trade
The Secretary of Commerce acting through the Director of the National Institute of Standards and Technology (NIST) implemented the Fastener Quality Act (the Act). The Act protects the public safety by: requiring that certain fasteners which are sold in commerce conform to the specifications to which they are represented to be manufactured; providing for accreditation of laboratories engaged in fastener testing; requiring inspection, testing; and certification in accordance with standardized methods of fasteners covered by the Act. The regulation also establishes, within the patent and Trademark Office (PTO), a recordation to identify the manufacturers or distributors of covered fasteners to ensure that the fasteners may be traced to their manufactuters or private label distributors. In addition, the regulations contain provisions on enforcement, civil penalties, and hearing and appeal procedures.
15 CFR 0-299

Global Engineering Documents®

Complete Set of MS/AN/AND Standard Drawings with Index
The MS Drawings Set is the single most useful source of standards drawings information for those who design, construct, procure, or maintain equipment for military applications. The MS Set is a collection of nearly 7,000 current U.S. Military Standard (MS), Air Force-Navy Aeronautical Standard (AN), and Air Force-Navy Design Standard (AND) drawings. The MS Set covers every aspect of hardware, components and fittings in a multitude of applications.
MS SET

Industrial Fasteners Institute (IFI)

Metric Fastener Standards - A Simplified Standards System for Metric Mechanical Fasteners
IFI-0100

Fastener Standards
IFI-0103

Test Procedures for the Performance of Nonmetallic Resistant Element Prevailing-Torque Screws
IFI-124

Carbon and Alloy Steel Wire, Rods, and Bars for Mechanical Fasteners
IFI-140

International Organization for Standardization (ISO)

Volume 1: Terminology and Nomenclature - General Reference Standards
ISO HDBK FASTENERS V1

International Organization for Standardization (ISO)

Quality is a strategic need. It is critical to you and your customers in today's competitive marketplace. Global has the resources to help your company achieve effective quality control by offering fast and complete access to ISO standards and publications.

ISO General Purpose Metric Screw Threads - General Plan
ISO 261

Mechanical Properties of Fasteners Made of Carbon Steel & Alloy Steel

Part 1: Bolts, Screws and Studs
ISO 898-1

Part 2: Nut with Specified Proof Load Values-Coarse Thread
ISO 898-2

Part 7: Torsional Test and Minimum Torques for Bolts and Screws with Nominal Diameters 1 mm to 10 mm
ISO 898-7

ISO General Purpose Metric Screw Threads - Tolerances - Part 1: Principles and Basic Data
ISO 965/1

Fasteners - Acceptance Inspection
ISO 3269

Tolerances for Fasteners - Part 1: Bolts, Screws, Studs and Nuts - Product Grades A, B and C
ISO 4759-1

General Requirements for the Competence of Testing and Calibration Laboratories
ISO/IEC 17025

ISO Standards Handbook, Fasteners and Screw Threads

The ISO Standards Handbook, Fasteners and Screw Threads gathers together into two volumes 186 international standards for fasteners and screw threads.

Volume 1: Terminology and Nomenclature - General Reference Standards
ISO HDBK FASTENERS V1

Volume 2: Product Standards
ISO HDBK FASTENERS V2

Japanese Standards Association (JSA)

Fasteners and Screw Threads Handbook
Provides terms, designation and drawing, screw threads components, rivets for general use, components of screw threads, fasteners, spanners, and screw drivers.
JIS FASTENERS HDBK

Global Engineering Documents®

Complete Set of MS/AN/AND Standard Drawings with Index
The MS Drawings Set is the single most useful source of standards drawings information for those who design, construct, procure, or maintain equipment for military applications. The MS Set is a collection of nearly 7,000 current U.S. Military Standard (MS), Air Force-Navy Aeronautical Standard (AN), and Air Force-Navy Design Standard (AND) drawings. The MS Set covers every aspect of hardware, components and fittings in a multitude of applications.
MS SET
MS SET RENEWAL

MS Drawings Index - Index to AN, AND and MS Drawings Standards
Organized into Inch and Metric sections, each containing numeric listings by document number and alphabetic listings by title. Includes number, title, revision level, date, and reaffirmation date if applicable. Updated Quarterly.
MS INDEX

Military Standards (MS) Drawings are available for individual purchase.

National Aerospace Standards (NAS)

Complete Set of NAS Standards
11-Volume Set, Includes NAS Index, and includes update service after first year.
NAS SET

National Aerospace Standards (NAS)

Complete Set of NAS Standards
11-Volume Set, Includes NAS Index, and includes update service for first year.
NAS SET

Renewal for NAS Set
Update service after first year.
NAS SET RENEWAL

Index to National Aerospace Standards
Organized into Inch and Metric sections, each section contains numeric listings by document number and alphabetic listings by title. Document listings include number, title, revision level, date, and reaffirmation date if applicable.
NAS INDEX

Complete Set of Metric Standards
Contains NA, NAM & DS Documents.
NAS METRIC SET

Renewal for NAS Metric Set
Update service after first year.
NAS METRIC SET RENEWAL

Global Engineering Documents®

Qualified Products Lists (QPL) Complete Set
The QPL Complete Set is a comprehensive resource, which identifies parts that have been qualified by test. This collection consists of both federal and military QPLs. The QPL Complete Set is an 11 volume set and includes the QPL Index and update service for the first year.
QPL COMPLETE SET
QPL COMPLETE SET RENEWAL

Qualified Products Lists Index
The QPL Index contains both federal and military QPLs and consists of two sections: a numerical listings by document number and alphabetical listing by document title. Each entry includes its number, title, current revision level, current revision date, and reaffirmation date.
QPL INDEX

Screw Thread Standards for Federal Services Set
Complete with all pertinent updates, this compilation provides the basic standard H28, plus its 24 detailed sub-standards and valuable appendices. This comprehensive source contains the complete collection at substantially less than the cost of individual documents. One volume includes ring binder.
FED-STD-H28 SET

Source of Supply (SOS)
The Source of Supply (SOS) is a fully illustrated source and selection directory to thousands of hardware components and their suppliers. Let the SOS do the research work for you. The SOS provides the critical information you need to evaluate, compare, and select the hardware components from manufacturing sources, all in one easy-to-use volume. Sections include: AN, MS, NAS, and NASM components organized by part number and part name, listed by size ranges, product materials, and procurement specifications when applicable. The SOS includes: Comprehensive listings of Military Drawings (DSCC), Microcircuit Drawings (SMD), and SAE International (SAE) Standards, which include identified sources for SAE parts and materials. Metric standards, including identified sources for metric parts and materials. Fastener Quality Act (FQA) accreditation bodies and accredited fasteners and metals laboratories listings. Comprehensive lists of manufacturers and distributors, including address, telephone number, fax number and e-mail address.
SOS

Screw Thread Standards for Federal Services (FED-STD-H28)

Compiled by Global Engineering Documents®

Screw Thread Standards for Federal Services Set
Complete with all pertinent updates, this compilation provides the basic standard H28, plus its 24 detailed sub-standards and valuable appendices. This comprehensive source contains the complete collection at substantially less than the cost of individual documents. One volume includes ring binder.
FED-STD-H28 SET

Adam Opel AG (OPEL)

Hydraulically Damping Elastomer Components - Hydro Bushing
GME 03021

Elastomer for Hydraulics Brake Cuffs
OPEL QE 001201

EPDM - Elastomer for Hydraulics Brake Cuff
OPEL QE 001211

American Petroleum Institute (API)

Recommended Practice in the Rheology and Hydraulics of Oil-Well Drilling Fluids
Provides information, procedures, and example calculations to aid in applying rheological principles to liquid oil field drilling fluids.
API RP 13D

American Petroleum Institute (API)

Recommended Practice in the Rheology and Hydraulics of Oil-Well Drilling Fluids
Provides information, procedures, and example calculations to aid in applying rheological principles to liquid oil field drilling fluids.
API RP 13D

Recommended Practices for Testing Sand used in Hydraulic Fracturing Operations
Assists gas plant operators in understanding their environmental responsibilities. Describes procedures and equipment that can best be used in testing and evaluating sand for use in hydraulic fracturing operations.
API RP 56

Centrifugal Pumps for General Refinery Services
Please see page 113 for a complete description.
API STD 610

Positive Displacement Pumps - Rotary
Covers the minimum requirements for rotary positive displacement pumps for use in the petroleum, chemical, and gas industries. It provides a purchase specification to facilitate the manufacture and purchase of rotary positive displacement pumps.
API STD 676

Pumps - Shaft Sealing Systems for Centrifugal and Rotary Pumps
Establishes the minimum electromechanical requirements for sealing systems for centrifugal and rotary pumps with seal sizes from 30 millimeters to 120 millimeters (1.5 inches to 4.5 inches). It also provides a standard seal design that has been tested and qualified under the service conditions for which it is intended to operate. In addition, this standard encourages evolving technology through qualification testing, data sheet input, and for engineered seals.
API STD 682

Sealless Centrifugal Pumps for Petroleum, Heavy Duty Chemical, and Gas Industry Services
API Standard 685 covers the minimum requirements for sealless centrifugal pumps for use in petroleum, heavy duty chemical, and gas industry services. The pumps covered by this standard are, Magnetic Drive Pumps (MDP), and Canned Motor Pumps (CMP).
API STD 685

ASME International (ASME)

Inspector's Manual for Elevators & Escalators
ASME A17.2

Specification for Horizontal End Suction Centrifugal Pumps for Chemical Process
ASME B73.1

Specification for Vertical In-Line Centrifugal Pumps for Chemical Process
ANSI B73.2M

Specification for Sealless Horizontal End Suction Centrifugal Pumps for Chemical Process
ANSI B73.3M

Asphalt Institute (AI)

Asphalt in Hydraulics
AI MS12

Association of Iron and Steel Engineers (AISE)

Selected Bearing, Lubrication and Hydraulics Engineering Papers
AISE SELECTED BEARING

British Standards Institution (BSI)

Refrigerating Systems and Heat Pumps - Safety and Environmental Requirements - Part 1: Basic Requirements, Definitions, Classification and Selection Criteria
BS EN 378-1

Machine Tools - Safety - Hydraulic Presses
BS EN 693

Pumps and Pump Units for Liquids - Common Safety Requirements
BS EN 809

Safety of Machinery - Safety Requirements for Fluid Power Systems and Their Components - Hydraulics
BS EN 982

Cameron Hydraulic Data

Cameron Hydraulic Data: A Handy Reference on the Subject of Hydraulics, and Steam
CAMERON HYDRAULIC DATA

Deutsches Institut fur Normung, e.V. (DIN)

Testing of Lubricants and Hydraulic Fluids; Determination of Air Release Properties
DIN 51381

Determination of Lubricants; Mechanical Testing of Hydraulic Fluids in the Vane - Cell - Pump; General Working Principles
DIN 51389 P1

Pressure Fluids; Hydraulic Oils; HL Hydraulic Oils
DIN 51524 P1

Handbook of Hydraulics

Written by Brater, King, Lindell, and Wei

Handbook of Hydraulics
HANDBOOK OF HYDRAULICS

Hydraulic Institute (HI)

Complete Set of Centrifugal, Reciprocating, Rotary, and Vertical Pump Standards
The greatly expanded Hydraulic Institute ANSI/HI Pump Standards Year 2000 Edition replaces all previous editions. It contains the latest information on the full range of pump types, including definitions, industry terminology, design and application, installation, operation, and maintenance guidelines. It also includes HI's widely accepted test standards in both Inch and Metric units. The 24-document set has been expanded to include more relevant data. In Centrifugal Pump Design and Application, there are seven new sections. A new Mechanical Test section for Centrifugal Pumps and Vertical Pumps has information on set-up and operation of a mechanical integrity test. For Vertical Pump Design and Application, four new sections are included. For Rotary Pumps there is a significant new section on nozzle loads. New general guidelines for pump, a tutorial section with revised text on vibrational dynamics for 11 different pump types and a guideline on condition monitoring for Centrifugal and Vertical pumps are included. A comprehensive index is supplied separately.
HI M100

Hydraulic Institute (HI)

Complete Set of Centrifugal, Reciprocating, Rotary, and Vertical Pump Standards
The greatly expanded Hydraulic Institute ANSI/HI Pump Standards Year 2000 Edition replaces all previous editions. It contains the latest information on the full range of pump types, including definitions, industry terminology, design and application, installation, operation, and maintenance guidelines. It also includes HI's widely accepted test standards in both Inch and Metric units. The 24-document set has been expanded to include more relevant data. In Centrifugal Pump Design and Application, there are seven new sections. A new Mechanical Test section for Centrifugal Pumps and Vertical Pumps has information on set-up and operation of a mechanical integrity test. For Vertical Pump Design and Application, four new sections are included. For Rotary Pumps there is a significant new section on nozzle loads. New general guidelines for pump, a tutorial section with revised text on vibrational dynamics for 11 different pump types and a guideline on condition monitoring for Centrifugal and Vertical pumps are included. A comprehensive index is supplied separately.
HI M100

Hydraulic Institute (HI)

Centrifugal Operations (1.4)
HI M103

Machine Tools-Horizontal Hydraulic Extrusion Press
HI M104

Vertical Tests (2.6)
HI M108

ANS for Reciprocating Pump Tests (Reciprocating Tests 6.6)
HI M114

General Pump Guidelines (9.1 - 9.5)
HI M117

Pump Intake Design (9.8)
Provides intake design recommendations for both suction pipes and all types of wet pits.
HI M123

International Organization for Standardization (ISO)

Hydraulic Fluid Power - Filter Elements - Verification of Fabrication Integrity and Determination of the First BubblePoint
ISO 2942

Hydraulic Fluid Power - Fluids - Method for Coding
ISO 4406

Hydraulic Fluid Power - Fluid Contamination - Determination of Particulate Contamination by the Counting Method Using an Optical Microscope
ISO 4407

Hydraulic Fluid Power - General Rules Relating to Systems
ISO 4413

Rotodynamic Pumps - Hydraulic Performance Acceptance Tests-Grades 1 and 2
ISO 9906

Hydraulic Fluid Power - Calibration of Automatic Particle Counters for Liquids
ISO 11171

Hydraulic Fluid Power Filters - Multi-Pass Method for Evaulating Filtration Performance of a Filter Element
ISO 16889

Japanese Standards Association (JSA)

Glossary of Terms for Oil Hydraulics and Pneumatics
JIS B 0142

Hydraulic Brake Master Cylinders for Automotive Hydraulic Brake Systems using a Non-Petroleum Base Brake Fluid
JIS D 2603

National Electrical Contractors Association (NECA)

Recommended Practice for Installing and Maintaining Motor Control Centers
NECA 402

National Electrical Manufacturers Association (NEMA)

Motors and Generators
The NEMA MG 1 standard assists users in the proper selection and application of motors and generators. While providing for changes in user needs, advances in technology, and changing economic trends. The MG 1 covers mechanical vibration, methods of cooling, rotating electrical machines, motor rating, dimensions, test and performance, and DC generators.
NEMA MG 1
NEMA MG 1 CD
NEMA MG 1 SET

National Fluid Power Association (NFPA)

Method for Verifying the Fatigue and Establishing the Burst Pressure Ratings of the Pressure Containing Envelope of a Metal Fluid Power Component
NFPA T2.6.1

Accumulator - Pressure Rating Supplement to NFPA/T2.6.1 R2-2000, Fluid Power Components - Method for Verifying the Fatigue and Establishing the Burst Pressure Ratings of the Pressure Containing Envelope of a Metal Fluid Power Accumulator
NFPA T3.4.7

Hydraulic Valve-Pressure Rating Supplement to NFPA/T2.6.1 R2-2000 Fluid Power Components - Method for Verifying the Fatigue and Establishing the Burst Pressure Ratings of the Pressure Containing Envelope of a Metal Fluid Power Hydraulic Valve
NFPA T3.5.26

SAE International (SAE)

Hydraulics - Theory and Application
SAE BOSCH-HY

Aerospace Fluid Power - Cleanliness Classification for Hydraulic Fluids
SAE AS 4059

Tests and Procedures for SAE 100R Series Hydraulic Hose and Hose Assemblies
SAE J343

Hydraulic Tube Fittings
SAE J514

Assessing Cleanliness of Hydraulic Fluid Power
SAE J1227

The Association For Manufacturing Technology (AMT)

Safety Requirements, Construction, Care and Use of Mechanical Power Presses
ANSI B11.1

Hydraulic Power Presses
ANSI B11.2

Power Press Brakes
ANSI B11.3

Machine Tools-Horizontal Hydraulic Extrusion Press
ANSI B11.17

Safeguarding When Referenced by Other B11 Machine Tool Safety Standards - Performance Criteria for the Design, Construction, Care and Operation
ANSI B11.19

Association for the Advancement of Medical Instrumentation (AAMI)

Medical Device Software - Software Life Cycle Processes

Specifies requirements for medical device software life cycle processes including primary life cycle development and maintenance processes, and supporting processes such as software hazard management, documentation, configuration management, verification and problem resolution. Applies to software that is a stand-alone medical device and to software that is an embedded or integral part of the final device and includes a compliance section based on whether or not the software can cause a hazard or controls risk.

AAMI SW68

Association for the Advancement of Medical Instrumentation (AAMI)

Biological Evaluation

Biological Evaluation of Medical Devices, Part 14: Identification and Quantification or Degradation Product from Ceramics

Provides guidance on general requirements for the design of procedures to obtain solutions for identification and quantification of degradation products from ceramic materials (including glasses). The part then gives guidance on the analysis of these solutions.

ANSI/AAMI/ISO 10993-14

Medical Equipment

Blood Pressure Transducers

Specifies safety and performance requirements for transducers, including cables, designed for blood pressure measurements through an in dwelling catheter or direct puncture and disclosure requirements to permit the user to determine compatibility between the transducer and blood pressure monitor.

AAMI BP22

Diagnostic Electrocardiographic Devices

Establishes minimum safety and performance requirements for electrocardiographic (ECG) systems with direct writing devices which are intended for use in the analysis of rhythm, and of detailed morphology of complex cardiac complexes. Subject to this standard are all parts of the electrocardiographic system necessary to obtain the signal from the surface of the patient's body, to amplify this signal, and to display it in a form suitable for diagnosing the heart's electrical activity. This standard defines requirements for the electrocardiographic recording system, from the input electrodes to the output display.

AAMI EC11

Cardiac Monitors, Heart Rate Meters and Alarms

Establishes minimum safety and performance requirements for electrocardiographic (ECG) heart rate and waveform monitors. Subject to this standard are all parts of such monitors necessary to (a) obtain a heart rate indication via noninvasive ECG sensing from the patient's body; (b) amplify and transmit this signal and display the heart rate and/or ECG waveform; and (c) provide alarms, based on adjustable alarm criteria, upon the sustained occurrence of the following rate-dependent phenomena: cardiac standstill, bradycardia, and tachycardia.

AAMI EC13

Ambulatory Electrocardiographs

This standard establishes minimum safety and performance requirements for long-term electrocardiographic monitoring devices (ECGs), also commonly called ambulatory electrocardiographs (AECGs), that are intended for use in the analysis of rhythm and of relevant morphology of cardiac complexes. Subject to this standard are all parts of such devices necessary to: a) obtain a signal from the surface of a patient's body; b) amplify and transmit the signal to recording and display devices; c) record and display the signal; and d) provide summaries of rhythms, conduction disturbances, and displacements of the ST segment.

AAMI EC38

Automatic External Defibrillators and Remote-Control Defibrillators

Covers energy range, controls and indicators, and other features of automatic or semiautomatic external defibrillators, including those designed for inhospital use, for use in homes and other locations, and remote-control defibrillators. Also includes requirements for self-adhesive electrodes for monitoring and defibrillation and requirements applicable to optional capabilities such as external pacing.

AAMI DF39

Electrosurgical Devices

This standard establishes minimum safety and performance requirements for electrosurgical systems. An electrosurgical system consists of a high-frequency electrical-current generator, cables, electrodes, and safety devices for delivering this high-frequency electrical energy to the patient in order to accomplish electrosurgery. The system includes the circuitry and devices needed to control the duration, mode of operation, and intensity of the application. Included within the scope of this standard are electrosurgical devices and the electrosurgical portion of multifunction devices. Examples of devices within the scope of this standard are electrosurgical high-frequency generators and directly related accessories, including active electrodes and cables, dispersive electrodes and cables, and footswitches or other operator-controlled mechanisms for activating the generator output.

AAMI HF18

Non-automated Sphygmomanometers

This standard establishes labeling requirements, performance requirements, test methods, and referee test methods for nonautomated sphygmomanometers used in the indirect measurement of blood pressure. Included within the scope of this standard are aneroid and mercury gravity sphygmomanometers used in conjunction with a stethoscope or other manual methods for detecting Korotkoff sounds and with any other type of display.

AAMI SP9

Safety, Design, and Maintenance

Safe Current Limits for Electromedical Apparatus
This standard sets risk current limits and referee test methods for electromedical apparatus intended for use in the patient care vicinity and also sets limits for non-patient-contact electromedical apparatus. The standard applies to line- and battery-powered apparatus and to apparatus used singly or with properly connected accessory equipment.
AAMI ES1

Human Factors Design Process for Medical Devices
Provides ergonomic information and human factors engineering guidance so that optimum user and patient safety, system safety and performance, and operator effectiveness will be reflected in medical device design. This document describes a recommended human factors engineering process for use in fulfilling user interface design requirements in the development of medical devices and systems, including hardware, software, and documentation.
AAMI HE74

Medical Device Software - Software Life Cycle Processes
Specifies requirements for medical device software life cycle processes including primary life cycle development and maintenance processes, and supporting processes such as software hazard management, documentation, configuration management, verification and problem resolution. Applies to software that is a stand-alone medical device and to software that is an embedded or integral part of the final device and includes a compliance section based on whether or not the software can cause a hazard or controls risk.
AAMI SW68

Medical Devices - Application of Risk Management to Medical Devices
Specifies a procedure for the manufacturer to identify the hazards associated with medical devices and their accessories including in vitro diagnostic devices, estimate and evaluate the risks, control these risks, and monitor the effectiveness of the control. This standard does not specify acceptable risk.
AAMI/ISO 14971

Sterilization

Sterilization of Health Care Products - Radiation Sterilization - Substantiation of 25kGy as a Sterilization Dose - Method VDmax
This technical report describes a method of substantiation of 25 kGy as the sterilization dose for radiation sterilization of health care products with an average bioburden for the entire product unit (SIP=1) less than 1000 colony-forming units (cfu). Application of the method described in this technical report may be used to meet the requirements specified under subclause 6.2.2 relating to product qualification in ANSI/AAMI/ISO 11137:1994.
AAMI TIR27

Sterilization of Health Care Products - Biological Indicators - Guidance for the Selection, Use and Interpretation of Results
Provides guidance for the selection, use, and interpretation of results from the application of biological indicators in the development, validation, and routine monitoring of sterilization processes
AAMI/ISO 14161

Sterilization of Health Care Products - Radiation Sterilization - Product Families and Sampling Plans for Verification Dose Experiments and Sterilization Dose Audits, and Frequency of Sterilization Dose Audits
Describes three approaches that the primary manufacturer can use to reduce the total number of product units tested to establish and audit the radiation sterilization dose while maintaining assurance that the designated sterility assurance level (SAL) is achieved. This TIR is intended to be used in conjunction with ANSI/AAMI/ISO 11137.
ANSI/AAMI/ISO TIR 15843

ASTM International (ASTM)

Medical Devices; Emergency Medical Services
ASTM 13.01

ASTM International (ASTM)

Biocompatibility

Standard Test Method for Conducting a 90-Day Oral Toxicity Study in Rats
ASTM E 1372

Standard Practice for Testing for Biological Responses to Particles In Vivo
ASTM F 1904

Cardiovascular/Neurology

Standard Specification for Wrought Titanium-6 Aluminum-4 Vanadium ELI (Extra Low Interstital) Alloy for Surgical Implant Applications (UNS R56401)
ASTM F 136

Standard Specification for Wrought 18 Chromium-14 Nickel-2.5 Molybdenum Stainless Steel Bar and Wire for Surgical Implants (UNS S31673)
ASTM F 138

Standard Specification for Wrought 35 Cobalt-35 Nickel-20 Chromium-10 Molybdenum Alloy for Surgical Implant Applications (UNS R30035)
ASTM F 562

Standard Practice for Evaluating and Specifying Implantable Shunt Assemblies for Neurosurgical Application
ASTM F 647

General Hospital/General Plastic Surgery

Standard Specification for Mercury-In-Glass, Maximum Self-Registering for Clinical Thermometers
ASTM E 667

Standard Specification for Phase Change-Type Disposable Fever Thermometer for Intermittent Determination of Human Temperature
ASTM E 825

Standard Specification for Direct-Reading Liquid Crystal Forehead Thermometers
ASTM E 1061

Standard Specification for Clinical Thermometer Probe Covers and Sheaths
ASTM E 1104

Standard Specification for Electronic Thermometer for Intermittent Determination of Patient Temperature
ASTM E 1112

Standard Specification for Infrared Thermometers for Intermittent Determination of Patient Temperature
ASTM E 1965

Standard Test Method for Resistance of Materials Used in Protective Clothing to Penetration by Synthetic Blood
ASTM F 1670

Standard Test Method for Resistance of Medical Face Masks to Penetration by Synthetic Blood (Horizontal Projection of Fixed Volume at a Known Velocity)
ASTM F 1862

Medical Devices

Medical Devices; Emergency Medical Services
Please see page 14 for a complete description.
ASTM 13.01

Obstetrics-Gynecology/Gastroenterology

Standard Performance Specification for Foley Catheter
ASTM F 623

Standard Practice for Cleaning and Disinfection of Flexible Fiberoptic and Video Endoscopes Used in the Examination of the Hollow Viscera
ASTM F 1518

Orthopedic

Standard Specification and Test Methods for Metallic Medical Bone Screws
ASTM F 543

Standard Specification for Unalloyed Titanium for Surgical Implant Applications (UNS R50250, UNS R50400, UNS R50550, UNS R50700)
ASTM F 67

Standard Practice for Surface Preparation and Marking of Metallic Surgical Implants
ASTM F 86

Standard Specification for Wrought 18 Chromium-14 Nickel-2.5 Molybdenum Stainless Steel Bar and Wire for Surgical Implants (UNS S31673)
ASTM F 138

Standard Specification for Wrought 18 Chromium-14 Nickel-2.5 Molybdenum Stainless Sheet and Strip for Surgical Implants (UNS S31673)
ASTM F 139

Standard Specification for Fixation Pins and Wires
ASTM F 366

Standard Specification for Wrought 35 Cobalt-35 Nickel-20 Chromium-10 Molybdenum Alloy for Surgical Implant Applications (UNS R30035)
ASTM F 562

Standard Specification and Test Methods for Metallic Bone Staples
ASTM F 564

Standard Specification for High-Purity Dense Aluminum Oxide for Surgical Implant Application
ASTM F 603

Standard Specification for Alpha Plus Beta Titanium Alloy Forgings for Surgical Implants
ASTM F 620

Standard Specification for Ultra-High-Molecular Weight Polyethylene Powder and Fabricated Form for Surgical Implants
ASTM F 648

Standard Specification for 18 Chromium-12.5 Nickel-2.5 Molybdenum Stainless Steel for Cast and Solution-Annealed Surgical Implant Applications
ASTM F 745

Standard Specification for Cobalt-28 Chromium-6 Molybdenum Alloy Forgings for Surgical Implants (UNS R31537, R31538, R31539)
ASTM F 799

Standard Practice for Permanent Marking of Orthopaedic Implant Components
ASTM F 983

Standard Specification for Beta-Tricalcium Phosphate for Surgical Implantation
ASTM F 1088

Standard Specification for Titanium-6Aluminum-4 Vanadium Alloy Castings for Surgical Implants (UNS R56406)
ASTM F 1108

Standard Specification for Wrought Titanium-6 Aluminum-7 Niobium Alloy for Surgical Implant Applications (UNS R56700)
ASTM F 1295

Standard Specification for Unalloyed Titanium Wire UNS R50250, UNS R50400, UNS R50550, UNS R50700 for Surgical Implant Applications
ASTM F 1341

Standard Specification for Wrought Titanium-6Aluminum-4Vanadium Alloy for Surgical Implant Applications (UNS R56400)
ASTM F 1472

Standard Specification for Wrought Cobalt-28-Chromium-6-Molybdenum Alloy for Surgical Implants (UNS R31537, UNS R31538, and UNS R31539)
ASTM F 1537

Standard Specification and Test Methods for External Skeletal Fixation Devices
ASTM F 1541

Standard Specification for Titanium and Titanium-6 Aluminum-4 Vanadium Alloy Powders for Coatings of Surgical Implants
ASTM F 1580

Standard Terminology Relating to Spinal Implants
ASTM F 1582

Radiology

Standard Test Method for Measurement of Magnetically Induced Displacement Force on Passive Implants in the Magnetic Resonance Environment
ASTM F 2052

International Electrotechnical Commission (IEC)

Medical Electrical Equipment - Part 1: General Requirements for Safety
This is the major revised and updated baseline of standards for the safety of all medical electrical equipment used by or under the supervision of qualified personnel in the general medical and patient environment. lt also contains certain requirements for reliable operation to ensure safety.
IEC 60601-1

Medical Electrical Equipment - Part 1: General Requirements for Safety; Collateral Standards: Electromagnetic Compatibility - Requirements and Tests
Specifies requirements and tests for electromagnetic compatibility of medical electrical equipment and medical electrical systems and serves as the basis of electromagnetic compatibility requirements and tests in particular standards. The existence of electromagnetic emission requirements is essential for the protection of: a) safety services; b) other medical electrical equipment and medical electrical systems; c) non-medical electrical equipment (e.g. computers); and d) telecommunications (e.g. radio/TV, telephone, radio-navigation). The existence of electromagnetic immunity requirements is essential to assure safety of equipment and systems. The immunity test levels specified in this standard (IEC 60601 test levels) represent the range found in the general medical use environment.
IEC 60601-1-2

International Electrotechnical Commission (IEC)

Anaesthetic, Respiratory and Reanimation Equipment

Medical Electrical Equipment - Part 2: Particular Requirements for the Safety of Cardiac Defibrillators and Cardiac Defibrillators - Monitors
Specifies requirements for the safety of cardiac defibrillators.
IEC 60601-2-4

Medical Electrical Equipment - Part 2-12: Particular Requirements for the Safety of Lung Ventilators - Critical Care Ventilators
Specifies the safety requirements for ventilators, as defined below, intended for use in critical care settings. Ventilator: automatic equipment that is intended to augment or provide ventilation of the lungs of the patient when connected to the airway of the patient.
IEC 60601-2-12

Medical Electrical Equipment - Part 2: Particular Requirements of Safety of Baby Incubators
This standard establishes safety requirements for baby incubators with the view to minimizing hazards to the patient and user. It also specifies tests by which compliance requirements can be verified. It does not apply to transport incubators nor infant radiant warmers which are covered in other publications.
IEC 60601-2-19

Medical Electrical Equipment - Part 2: Particular Requirements for the Safety of Transport Incubators
This standard establishes safety standards for the safety of transport incubators which minimize hazards to the patient and user. lt also specifies tests to verify compliance with the requirements. It does not apply to baby incubators or radiant warmers.
IEC 60601-2-20

Diagnostic Equipment

Medical Electrical Equipment - Part 2: General Requirements for Safety of Invasive Blood Pressure Monitoring Equipment
Defines requirements specific to the safety, including essential performance, of invasive blood pressure monitoring equipment. Takes into account collateral standard IEC 60601-1-2 (1993): Electromagnetic Compatibility, and collateral standard IEC 60601-1-4 (1996): Programmable Electrical Medical Systems. A section on alarms has been included because alarms are necessary for monitoring equipment.
IEC 60601-2-34

Medical Electrical Equipment - Part 2-37: Particular Requirements for the Safety of Ultrasonic Medical Diagnostic and Monitoring Equipment
Establishes particular requirements for the safety of ultrasonic diagnostic equipment and those aspects thereof which are directly related to safety. Does not cover ultrasonic therapeutic equipment; however, equipment used for the imaging of body structures by ultrasound in conjunction with therapeutic modalities is covered.
IEC 60601-2-37

Medical Electrical Equipment - Part 2-47: Particular Requirements for the Safety, Including Essential Performance, of Ambulatory Electrocardiographic Systems
Specifies the particular safety requirements for ambulatory electrocardiographic systems. Within the scope of this standard are systems of the following types: a) Systems that provide continuous recording and continuous analysis of the ECG allowing full re-analysis giving essentially similar results. The systems may first record and store the ECG and analyse it later on a separate unit, or record and analyse the ECG simultaneously. The type of storage media used is irrelevant with regard to this standard; b) Systems that provide continuous analysis and only partial or limited recording not allowing a full re-analysis of the ECG. The safety aspects of this standard apply to all types of systems falling in one of the above-mentioned categories.
IEC 60601-2-47

Medical Electrical Equipment - Part 2-49: Particular Requirements for the Safety of Multifunction Patient Monitoring Equipment
Specifies requirements for the safety of multifunction patient monitoring equipment. Multifunction patient monitoring equipment is defined as a modular or pre-configured device including more than one physiological monitoring unit designed to collect information from a single patient and process it for monitoring purposes and to generate alarms.
IEC 60601-2-49

Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 2-101: Particular Requirements for In Vitro Diagnostic (IVD) Medical Equipment
Applies to equipment intended for in vitro diagnostic (IVD) medical purposes. This is used for the examination of specimens, including blood and tissue samples, derived from the human body. The standard also covers self-test IVD medical equipment for use by lay persons.
IEC 61010-2-101

Hospital Equipment

Medical Electrical Equipment - Part 2: Particular Requirements for the Safety of Blankets, Pads and Mattresses, Intended for Heating in Medical Use
Establishes requirements, which minimize hazards to patient and operator, for heating devices such as blankets, pads, mattresses, and fluid-filled mattresses. Specifies tests by which comliance can be verified.
IEC 60601-2-35

Medical Electrical Equipment - Part 2: Particular Requirements for the Safety of Electrically Operated Hospital Beds
Specifies requirements for safety of electrically operated hospital beds. The object of this standard is to keep the safety hazards to patients, operators, and the environment as low as possible, and to describe tests to verify that these requirements are attained.
IEC 60601-2-38

Medical Electrical Equipment - Part 2-46: Particular Requirements for the Safety of Operating Tables
Specifies safety requirements for operating tables, whether or not having electrical parts, including transporters used for the transportation of the table top to or from the base or pedestal of an operating table with detachable table top.
IEC 60601-2-46

Medical Equipment

Medical Electrical Equipment - Part 1: General Requirements for Safety
This is the major revised and updated baseline of standards for the safety of all medical electrical equipment used by or under the supervision of qualified personnel in the general medical and patient environment. lt also contains certain requirements for reliable operation to ensure safety.
IEC 60601-1

Medical Equipment in General

Fundamental Aspects of Safety Standards for Medical Electrical Equipment
This report identifies fundamental considerations to be taken into account in developing standards to ensure the safety of medical electrical equipment. It follows closely recommendations of ISO/IEC Guide 51 and expands on matters which are unique to, or critical in, the application of medical electrical equipment.
IEC 60513

Medical Electrical Equipment - Part 1: General Requirements for Safety; Collateral Standards: Safety Requirements for Medical Electrical Systems
Applies to the safety of medical electrical systems, as defined as follows: combination of items of equipment, at least one of which must be medical electrical equipment and inter-connected by functional connection or use of a multiple portable socket-outlet. Describes the safety requirements necessary to provide protection for the patient, the operator and surroundings.
IEC 60601-1-1

Medical Electrical Equipment - Part 1: General Requirements for Safety; Collateral Standards: Electromagnetic Compatibility - Requirements and Tests
Specifies requirements and tests for electromagnetic compatibility of medical electrical equipment and medical electrical systems and serves as the basis of electromagnetic compatibility requirements and tests in particular standards. The existence of electromagnetic emission requirements is essential for the protection of: a) safety services; b) other medical electrical equipment and medical electrical systems; c) non-medical electrical equipment (e.g. computers); and d) telecommunications (e.g. radio/TV, telephone, radio-navigation). The existence of electromagnetic immunity requirements is essential to assure safety of equipment and systems. The immunity test levels specified in this standard (IEC 60601 test levels) represent the range found in the general medical use environment.
IEC 60601-1-2

Medical Electrical Equipment - Part 1-4: General Requirements for Collateral Standard: Programmable Electrical Medical Systems

Specifies requirements for the process by which a programmable electrical medical system is designed. Serves as the basis of requirements of particular standards, including serving as a guide to safety requirements for the purpose of reducing and managing risk. This standard covers requirement specification, architecture, detailed design and implementation software development, modification, verification and validation, marking and accompanying documents.

IEC 60601-1-4

Ultrasonics - Surgical Systems - Measurement and Declaration of the Basic Output Characteristics

This standard specifies: 1) the essential non-thermal output characteristics of ultrasonic surgical units; 2) methods of measurement of these output characteristics; and 3) those characteristics which should be declared by the manufacturers of such equipment. This standard is applicable to equipment which meets the requirements of a, b and c below: a) ultrasonic surgical systems operating in the frequency range 20 kHz to 60 kHz; b) ultrasonic surgical systems, whose use is the fragmentation or cutting of human tissue, whether or not those effects are delivered in conjunction with tissue removal or coagulation; and c) ultrasonic surgical systems, in which an acoustic wave is conducted by means of a specifically designed wave guide to deliver energy to the surgical site.

IEC 61847

Other Medical Equipment

Medical Electrical Equipment - Part 2-25: Particular Requirements for the Safety of Electrocardiographs

Specifies the particular safety requirements for electrocardiographs, intended for the production of detachable electrocardiograms for diagnostic purposes. Also applies to vectorcardiographs and equipment for stress testing.

IEC 60601-2-25

Safety of Laser Products - Part 8: Guidelines for the Safe Use of Medical Laser Equipment

Serves as a guide intended to give information to the employer and the user on the safe use of lasers and laser equipment classified as class 3B or class 4, for diagnostic and therapeutic applications in healthcare facilities. Explains the control measures recommended for the safety of patients, staff, maintenance personnel, and others. Engineering controls which form part of the laser equipment or the installation are also briefly described to provide an understanding of the general principles of protection.

IEC/TR 60825-8

Radiographic Equipment

Medical Electrical Equipment - Part 1: General Requirements for Safety - Collateral Standard: General Requirements for Radiation Protection in Diagnostic X-Ray Equipment

Establishes general requirements for protection against ionizing radiation in medical diagnostic x-ray equipment, in order that the dose equivalent to the patient, the operator and other staff can be kept as low as reasonably achievable.

IEC 60601-1-3

Medical Electrical Equipment Part 2: Particular Requirements for the Safety of Endoscopic Equipment

Establishes particular requirements for the safety of endoscopic equipment and enables parts of endoscopic equipment to be tested together or individually.

IEC 60601-2-18

Medical Electrical Equipment - Part 2: Particular Requirements for the Safety of Diagnostic and Therapeutic Laser Equipment

Applies to laser equipment for medical applications, classified as a class 3B or class 4 laser product according to the classification in IEC 60825-1.

IEC 60601-2-22

Electrical Equipment Part 2: Particular Requirements for the Safety of Electroencephalographs

Specifies the particular safety requirements for electroencephalographs defined as medical electrical equipment intended for the production of graphic recordings and/or a visual display of electrical activity of the brain for diagnostic purposes.

IEC 60601-2-26

Medical Electrical Equipment - Part 2: Particular Requirements for the Safety of Electrocardiographic Monitoring Equipment

Specifies the particular safety requirements for electrocardiographic monitoring equipment defined as 'equipment and associated electrodes for the monitoring and/or recording of heart action potentials and displaying the resultant data locally and/or transmitting to a central station'.

IEC 60601-2-27

Medical Electrical Equipment Part 2: Particular Requirements for the Safety of Associated Equipment of X-Ray Equipment

Applies to equipment and devices associated to x-ray equipment as used for supporting and relatively positioning the functional components including the patient support used for the application of the x-radiation. This standard applies to all associated equipment not covered by other particular standards.

IEC 60601-2-32

Medical Electrical Equipment - Part 2-44: Particular Requirements for the Safety of X-Ray Equipment for Computed Tomography

Applies to x-ray equipment for computed tomography (CT scanners). Includes safety requirements for the x-ray generator, and those where high voltage generators are integrated with an x-ray tube assembly. Specify methods for demonstrating compliance with those requirements for CT scanners.

IEC 60601-2-44

Radiotherapy Equipment - Coordinates, Movements and Scales

Applies to equipment and data related to the process of teleradiotherapy, including patient image data used in relation with radiotherapy treatment planning systems, radiotherapy simulators, isocentric gamma beam therapy equipment, isocentric medical electron accelerators, and non-isocentric equipment when relevant. The object of this standard is to define a consistent set of coordinate systems for use throughout the process of teleradiotherapy, to define the marking of scales (where provided), to define the movements of equipment used in this process, and to facilitate computer control when used.

IEC 61217

Radionuclide Imaging Devices - Characteristics and Test Conditions Part 1: Positron Emission Tomographs
Specifies terminology and test methods for declaring the characteristics of positron emission tomographs. Positron emission tomographs detect the annihilation radiation of positron emitting radionuclides by coincidence detection. It is intended that the test methods be carried out by the manufacturers, thereby enabling them to declare the characteristics of positron emission tomographs. So, the specifications given in the accompanying documents shall be in accordance with this standard.
IEC 61675-1

Sterilization and Disinfection

Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 2-045: Particular Requirements for Washer Disinfectors Used in Medical, Pharmaceutical, Veterinary and Laboratory Fields
Applies to washer disinfectors and other equipment used for washing and disinfection. This is for the treatment of soiled items used in the medical, veterinary, pharmaceutical, and laboratory fields.
IEC 61010-2-045

Sterilizing Equipment

Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 2-041: Particular Requirements for Autoclaves Using Steam for the Treatment of Medical Materials, and for Laboratory Processes
Applies to autoclaves, including those with an automatic loading and unloading system, which incorporate a pressure vessel, using steam within the absolute pressure range from 0 to 500 kPa, and intended for the treatment of medical materials and for laboratory processes, such as sterilization.
IEC 61010-2-041

Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 2-042: Particular Requirements for Autoclaves and Sterilizers Using Toxic Gas for the Treatment of Medical Materials, and for Laboratory Processes
Applies to autoclaves and sterilizers, including those with an automatic loading and unloading system, which incorporate a chamber using toxic gas intended for the treatment of medical materials, and for laboratory processes, such as sterilization.
IEC 61010-2-042

Surgical Instruments and Materials

Medical Electrical Equipment - Part 2-2: Particular Requirements for the Safety of High Frequency Surgical Equipment
Specifies requirements for the safety of high frequency surgical equipment used in medical practice.
IEC 60601-2-2

Medical Electrical Equipment - Part 2-41: Particular Requirements for the Safety of Surgical Luminaires and Luminaires for Diagnosis
Establishes particular requirements for the safety of surgical luminaires and luminaires for diagnosis.
IEC 60601-2-41

Therapy Equipment

Medical Electrical Equipment - Part 2-1: Particular Requirements for the Safety of Electron Accelerators in the Range 1 Mev to 50 Mev
Establishes requirements to be complied with by manufacturers in the design and construction of electron accelerators for use in radiotherapy and defines type tests and site tests. Places limits on the degradation of equipment performance beyond which it can be presumed that a fault condition exists and where an interlock then operates to prevent continued operation of the equipment.
IEC 60601-2-1

Medical Electrical Equipment - Part 2-5: Particular Requirements for the Safety of Ultrasonic Physiotherapy Equipment
Specifies requirements and tests for the safety of ultrasonic physiotherapy equipment.
IEC 60601-2-5

Medical Electrical Equipment - Part 2: Particular Requirements for the Safety of Nerve and Muscle Stimulators
Specifies particular requirements for the safety of electrical stimulators of muscles and nerves in the specialized practice of physical medicine. It excludes stimulators used with implanted electrodes, brain stimulation, neurological research, cardiac pacemakers, defibrillators, and other surgical procedures.
IEC 60601-2-10

Graphical Symbols for Electrical Equipment in Medical Practice
This composite publication brings together the specialized graphical symbols used in medical practice and which heretofore appeared in more general lists. It is divided into five sections, as follows: general relevant symbols; specialized symbols to identify the classification of equipment; safety symbols; symbols for ionizing radiation equipment; and symbols for display, communication, and recording.
IEC 60878

Transfusion, Infusion and Injection Equipment

Medical Electrical Equipment - Part 2: Particular Requirements for the Safety of Haemodialysis Equipment
Specifies the minimum safety requirements for single patient haemodialysis, haemodiafiltration and haemofiltration equipment. These devices are intended for use either by medical staff or under the supervision of medical expertise, including haemodialysis, haemodiafiltration and haemofiltration equipment operated by the patient.
IEC 60601-2-16

Medical Electrical Equipment - Part 2-24: Particular Requirements for the Safety of Infusion Pumps and Controllers
Specifies the requirements for infusion pumps, infusion controllers, syringe pumps and pumps for ambulatory use. These devices are intended for use by medical staff and home patients as prescribed and medically indicated. It is the responsibility of the manufacturer to ensure that the requirements of this standard are reliably implemented.
IEC 60601-2-24

International Organization for Standardization (ISO)

Biological Evaluation of Medical Devices - Part 1: Evaluation and Testing
ISO 10993-1

Quality Systems - Medical Devices - Particular Requirements for the Application of ISO 9001
Specifies, in conjunction with the application of ISO 9001, the quality system requirements for the design/development and, when relevant, installation and servicing of medical devices.
ISO 13485

Medical Devices - Application of Risk Management to Medical Devices
ISO 14971

International Organization for Standardization (ISO)

Anaesthetic, Respiratory and Reanimation Equipment

Oxygen Monitors for Monitoring Patient Breathing Mixtures - Safety Requirements
ISO 7767

Humidifiers for Medical Use - General Requirements for Humidification Systems
ISO 8185

Oxygen Concentrators for Medical Use - Safety Requirements
Based on IEC 60601-1. Specifies safety requirements for oxygen concentrators. Does not apply to oxygen concentrators intended to supply gas to several patients via a medical gas pipeline system.
ISO 8359

Anaesthetic and Respiratory Equipment - Heat and Moisture Exchangers (HMEs) for Humidifying Respired Gases in Humans - Part 1: HMEs for use with Minimum Tidal Volumes of 250 ml
ISO 9360-1

Anaesthetic and Respiratory Equipment - Heat and Moisture Exchangers (HMEs) for Humidifying Respired Gases in Humans - Part 2: HMEs for use with Tracheostomized Patients Having Minimum Tidal Volumes of 250 ml
ISO 9360-2

Medical Suction Equipment - Part 1: Electrically Powered Suction Equipment - Safety Requirements
ISO 10079-1

Medical Suction Equipment - Part 3: Suction Equipment Powered from a Vacuum or Pressure Source
ISO 10079-3

Lung Ventilators for Medical Use - Part 2: Particular Requirements for Home Care Ventilators
ISO 10651-2

Lung Ventilators - Part 4: Particular Requirements for Operator-Powered Resuscitators
ISO 10651-4

Sleep Apnoea Breathing Therapy - Part 1: Sleep Apnoea Breathing Therapy Devices
ISO 17510-1

Implants for Surgery, Prosthetics and Orthotics

Implants for Surgery - Acrylic Resin Cements
This international standard specifies the physical, mechanical, packaging, and labeling requirements for curing polymerizing radio-opaque and non-radio-opaque resin cements based on poly(methacrylic acid esters). It applies to two types of cement, intended respectively for use with a syringe or in the dough state, for the fixation of internal orthopaedic prostheses and supplied as units containing premeasured amounts of sterile powder and of sterile liquid in forms suitable for mixing at the time of implantation.
ISO 5833

Implants for Surgery - Metal Bone Screws with Hexagonal Drive Connection, Spherical Under-Surface of Head, Asymmetrical Thread - Dimensions
Gives dimensions and tolerances and the code for screw thread. Screws with shallow thread shall be as given in Figures 1 and 2 and Tables 1 and 2. Screws with deep thread shall be as given in Figures 3 and 4, and in Tables 3 and 4. Marking and packaging shall be in accordance with ISO 6018. An example for combined screw is given in Annex A. An interrelationship of international standards dealing with bone screws, bone plates and relevant tools is given in Annex B. Bibliography is given in Annex C.
ISO 5835

Cardiac Pacemakers - Part 1: Implantable Pacemakers
This standard is valid for all types of implantable pacemakers and specifies as well the basic terms and definitions as the requirements for designation and packaging of pacemakers. In connection with the corresponding test methods minimum requirements are given for the ability of a pacemaker generator to resist adverse environmental conditions. The Annexes A to F contain a code system for identification of the mode of operation, test methods, evaluation of livetime, certain forms and the symbols that can be be used instead of written words.
ISO 5841-1

Implants for Surgery - Cardiac Pacemakers - Part 2: Reporting of Clinical Performance of Populations of Pulse Generators or Leads
ISO 5841-2

Implants for Surgery - Cardiac Pacemakers - Part 3: Low-Profile Connectors (IS-1) for Implantable Pacemakers
ISO 5841-3

Haemodialysers, Haemofilters and Haemoconcentrators

This standard specifies the requirements for devices applied in the haemodialysis in a single use. Design materials, test methods for biocompatibility, restrictions of sterilization and some performance characteristics are not included. Further it does not cover devices assembled and sterilized by the manufacturer. The requirements for devices used in the extracorporal blood circuit are given in ISO 8638. The user, the extracorporeal blood circuit, plasmafilters, haemoperfusion devices, vascular access devices, blood pumps, dialysing fluid systems, etc.

ISO 8637

Extracorporeal Blood Circuit for Haemodialysers, Haemofilters and Haemoconcentrators

This standard specifies the requirements for the extracorporal blood circuit applied in the haemodialysis in a single use. Design materials, test methods for biocompatibility, restrictions of sterilization and some performance characteristics are not included. Further it does not cover the hardware of neither haemodialysers, haemofilters and haemoconcentrators nor blood pumps, pressure monitors, air detectors, systems, etc.

ISO 8638

Cardiac Defibrillators - Connector Assembly DF-1 for Implantable Defibrillators - Dimensions and Test Requirements

This international standard specifies a unipolar connector assembly, DF-1, intended for use in connecting implantable defibrillator leads to implantable defibrillator generators that do not produce more than 1 kV/50 A peak output. Essential dimensions and performance requirements related to connector fit are specified, along with test methods.

ISO 11318

Implants for Surgery - Hydroxyapatite - Part 1: Ceramic Hydroxyapatite

ISO 13779-1

Implants for Surgery - Hydroxyapatite - Part 2: Coatings of Hydroxyapatite

ISO 13779-2

Implants for Surgery - Hydroxyapatite - Part 4: Determination of Coating Adhesion Strength

This part of ISO 13779 specifies test methods for measurement of the adhesion strength of hydroxyapatite coatings intended for use on components of surgical implants.

ISO 13779-4

Poly(L-Lactide) Resins and Fabricated Forms for Surgical Implants - In Vitro Degradation Testing

Describes methods for the determination of chemical and mechanical changes in properties of poly (L-lactide) under in vitro degradation testing conditions. The poly L-lactid is used for the manufacture of surgical implants. The purpose is to compare and/or evaluate materials or processing conditions.

ISO 13781

Concentrates for Haemodialysis and Related Therapies

This international standard is applicable to dry and liquid concentrates to be diluted for use as dialysing fluids in haemodialysis or haemodiafiltration. It addresses chemical quality and purity, microbial contamination, handling, measurement and labelling of concentrates, the requirements for containers, and the tests to monitor concentrates.

ISO 13958

Water for Haemodialysis and Related Therapies

This international standard specifies minimum requirements for water to be used in the preparation of concentrates and dialysing fluids for haemodialysis and haemodiafiltration.

ISO 13959

Implants for Surgery - Wear of Total Hip-Joint Prostheses - Part 1: Loading and Displacement Parameters for Wear-Testing Machines and Corresponding Environmental Conditions for Test

This part of ISO 14242 specifies the relative angular movement between articulating components, the pattern of the applied force, speed and duration of testing, sample configuration, and test environment to be used for the wear testing of total hip-joint prostheses.

ISO 14242-1

Implants for Surgery - Wear of Total Hip-Joint Prostheses - Part 2: Methods of Measurement

ISO 14242-2

Non-Active Surgical Implants - General Requirements

ISO 14630

Prostheses - Structural Testing of Hip Units

ISO 15032

Laboratory Medicine

Biological Evaluation of Medical Devices - Part 1: Evaluation and Testing

ISO 10993-1

Biological Evaluation of Medical Devices - Part 2: Animal Welfare Requirements

Specifies minimum requirements for the use of animals in biological testing. Is also intended to establish guidelines which allow the scientist to respect life in general, to reduce the number of animal experiments and the number of animals used in experiments, to minimize suffering, and maintain the quality of life of the animals used in the experiments. Applies to the experimentation performed on vertebrates.

ISO 10993-2

Biological Evaluation of Medical Devices - Part 3: Tests for Genotoxicity, Carcinogenicity and Reproductive Toxicity

Most tests specified refer to the OECD guidelines for testing of chemicals. At the time of testing, these tests are to be performed according to current OECD guidelines. Guidance on selection of tests is provided in ISO 10993-1.

ISO 10993-3

Biological Evaluation of Medical Devices - Part 4: Selection of Tests for Interactions with Blood
Describes a classification of medical and dental devices that are intended for use in contact with blood, the fundamental principles governing the evaluation of the interaction of devices with blood, and the rationale for structured selection of tests, together with the principles and scientific basis of these tests. Annex A describes evaluation of cardiovascular devices and prostheses during in vivo function.
ISO 10993-4

Biological Evaluation of Medical Devices - Part 5: Tests for Cytotoxicity: In Vitro Methods
ISO 10993-5

Biological Evaluation of Medical Devices - Part 6: Test for Local Effects After Implantation
Specifies test methods for the assessment of the local effects of an implant material on living tissue, at both the macroscopic and microscopic level. The local effects are evaluated by a comparison of the tissue response caused by a test specimen to that caused by materials used in medical devices whose clinical acceptability has been established. The test methods for local effects after implantation are used to assess subchronic effects (short-term, up to 12 weeks), or chronic effects (long-term, longer than 12 weeks).
ISO 10993-6

Biological Evaluation of Medical Devices - Part 7: Ethylene Oxide Sterilization Residuals
Specifies allowable limits for residual ethylene oxide (EO) and ethylene chlorohydrin (ECH) in individual EO-sterilized medical devices and procedures for the measurement of EO and ECH. Does not apply for EO-sterilized devices that have no patient contact such as in vitro diagnostic devices.
ISO 10993-7

Biological Evaluation of Medical Devices - Part 8: Selection and Qualification of Reference Materials for Biological Tests
ISO 10993-8

Biological Evaluation of Medical Devices - Part 9: Framework for Identification and Quantification of Potential Degradation Products
ISO 10993-9

Biological Evaluation of Medical Devices - Part 10: Tests for Irritation and Delayed-Type Hypersensitivity
This part of ISO 10993 describes the procedure for the assessment of medical devices and their constituent materials with regard to their potential to produce irritation and delayed-type hypersensitivity.
ISO 10993-10

Biological Evaluation of Medical Devices - Part 11: Tests for Systemic Toxicity
Specifies methodologies for the evaluation of the systemic toxicity potential of medical devices which release constituents into the body. Includes pyrogenicity testing. The methods cited are from international standards, national standards, directives, and regulations.
ISO 10993-11

Biological Evaluation of Medical Devices - Part 12: Sample Preparation and Reference Materials
Specifies requirements and guidance on procedures to be followed in the preparation of samples of medical devices for testing in biological systems. Includes test material selection, selection of representative portions from a device, and selection of reference materials to demonstrate the suitability of the test system.
ISO 10993-12

Biological Evaluation of Medical Devices - Part 13: Identification and Quantification of Degradation Products from Polymeric Medical Devices
ISO 10993-13

Biological Evaluation of Medical Devices - Part 14: Identification and Quantification of Degradation Products from Ceramics
ISO 10993-14

Biological Evaluation of Medical Devices - Part 15: Identification and Quantification of Degradation Products from Metals and Alloys
ISO 10993-15

Biological Evaluation of Medical Devices - Part 16: Toxicokinetic Study Design for Degradation Products and Leachables
ISO 10993-16

Clinical Investigation of Medical Devices
Pertains to the clinical investigation in human subjects of those medical devices whose clinical performance needs assessment. Specifies the requirements for conducting the clinical investigation and documentation. Provides the framework for systematic written procedures for the organization, design, implementation, and data collection.
ISO 14155

Medical Equipment in General

Quality Systems - Medical Devices - Particular Requirements for the Application of ISO 9001
Specifies, in conjunction with the application of ISO 9001, the quality system requirements for the design/development and, when relevant, installation and servicing of medical devices.
ISO 13485

Quality Systems - Medical Devices - Particular Requirements for the Application of ISO 9002
Specifies, in conjunction with the application of ISO 9002, the quality system requirements for the production and, when relevant, installation and servicing of medical devices.
ISO 13488

Quality Systems - Medical Devices - Guidance on the Application of ISO 13485 and ISO 13488
ISO 14969

Medical Devices - Application of Risk Management to Medical Devices
ISO 14971

Medical Devices - Symbols to be used with Medical Device Labels, Labelling and Information to be Supplied
ISO 15223

Physical Medicine

Wheelchairs - Part 1: Determination of Static Stability
ISO 7176-1

Wheelchairs - Part 2: Determination of Dynamic Stability of Electric Wheelchairs
ISO 7176-2

Steriilzation and Disinfection in General

Sterilization of Health Care Products - Requirements for Validation and Routine Control - Industrial Moist Heat Sterilization
Specifies requirements for the use of moist heat in sterilization process development, validation of the sterilization process, and control of routine sterilization. Covers all moist heat processes, including saturated steam and air-steam mixtures, and applies to all industrial manufacturers and all others who perform contract moist heat sterilization. Although moist heat sterilization in non-industrial health care facilities is not specifically covered, the principles outlined may be useful to the user of moist heat sterilization in these facilities.
ISO 11134

Medical Devices - Validation and Routine Control of Ethylene Oxide Sterilization
Establishes requirements and guidance. Particular attention is drawn to the need for specific testing for safety, quality and efficacy, possibly exceeding the general requirements, which may be necessary for a specific product. Attention is drawn to the existence in some countries of regulations laying down safety requirements for handling ethylene oxide and for premises in which it is used as well as of regulations laying down limits for the level of ethylene oxide residues within medical devices and products.
ISO 11135

Sterilization of Health Care Products - Requirements for Validation and Routine Control - Radiation Sterilization
Specifies requirements for validation, process control and routine monitoring in the radiation sterilization of health care products. Applies to continuous and batch type gamma irradiators using the radionuclides 60 Co and 137 Cs, and to irradiators using a beam from an electron or x-ray generator. Does not cover facility design, licensing, operator training, factors related to radiation safety, or the assessment of the suitability of the product for its intended use.
ISO 11137

Sterilization of Health Care Products - Biological Indicators - Part 1: General
Specifies general production, labeling and performance requirements for the manufacture of biological indicators and suspensions intended for use in the validation and monitoring of sterilization cycles. Does not contain requirements for product directly inoculated with test organisms, or recovery procedures for such inoculated product.
ISO 11138-1

Sterilization of Health Care Products - Biological Indicators - Part 2: Biological Indicators for Ethylene Oxide Sterilization
Provides specific requirements for test organisms and biological indicators intended for use in assessing the performance of sterilizers employing pure ethylene oxide gas or admixtures of the gas with diluent gases at sterilizing temperatures within the range of 20° C to 65° C.
ISO 11138-2

Sterilization of Health Care Products - Biological Indicators - Part 3: Biological Indicators for Moist Heat Sterilization
Gives specific requirements for test organisms and biological indicators intended for use in assessing the performance of sterilizers employing moist heat as the sterilant.
ISO 11138-3

Sterilization of Medical Devices - Microbiological Methods - Part 1: Estimation of Population of Microorganisms on Products
Specifies general criteria for the estimation of the population of viable microorganisms on medical devices or packages. Not applicable for the enumeration or identification of viral contamination and to the microbiological monitoring of the environment in which medical devices are manufactured.
ISO 11737-1

Sterilization of Medical Devices - Microbiological Methods - Part 2: Tests of Sterility Performed in the Validation of a Sterilization Process
ISO 11737-2

Aseptic Processing of Health Care Products - Part 1: General Requirements
ISO 13408-1

Sterilization of Health Care Products - Radiation Sterilization - Substantiation of 25 kGy as a Sterilization Dose for Small or Infrequent Production Batches
ISO TS 13409 describes a method of substantiating the suitability of 25 kGy as a sterilization dose for radiation sterilization of products with an average bioburden of less than 1,000 colony-forming units (cfu) that are manufactured in small quantities (less than 1,000 product units).
ISO TS 13409

Sterilization of Health Care Products - General Requirements for Characterization of a Sterilizing Agent and the Development, Validation and Routine Control of a Sterilization Process for Medical Devices
ISO 14937

Sterilization of Health Care Products - Radiation Sterilization - Product Families and Sampling Plans for Verification Dose Experiments and Sterilization Dose Audits, and Frequency of Sterilization Dose Audits
ISO TS 15843

Surgical Instruments and Materials

Surgical Instruments - Metallic Materials - Part 1: Stainless Steel
Contains a survey and a selection of stainless steels available for use in the manufacture of surgical, dental and specific instruments for orthopaedic surgery. It takes into account steel grades and chemical compositions.
ISO 7153/1

Surgical and Dental Hand Instruments - Determination of Resistance Against Autoclaving, Corrosion and Thermal Exposure
Describes test methods to determine the resistance of stainless steel surgical and dental hand instruments against autoclaving, corrosion, and thermal exposure.
ISO 13402

Transfusion, Infusion and Injection Equipment

Conical Fittings with a 6% (Luer) Taper for Syringes, Needles and Certain Other Medical Equipment - Part 1: General Rrequirements

Specification of the requirements for conical (Luer) fittings for use with hyperdemic syringes and needles and with certain other apparatus for medical use such as transfusion and infusion sets. It covers fittings made of rigid and semi-rigid materials and includes test methods for gauging and performance. It excludes provision for more flexible or elastomeric materials. The Annex on liquid leakage is given as an example.

ISO 594-1

Conical Fittings With a 6% (Luer) Taper for Syringes, Needles and Certain Other Medical Equipment - Part 2: Lock Fittings

ISO 594-2

Sterile Hypodermic Needles for Single Use

Specifies the following requirements for needles of nominal outside diameters 0.3 mm and 1.2 mm: nomenclature for components, cleanliness, limits for acidity and alkalinity, size designation, colour coding, needle hub, sheath, needle tube, needle point, performance, packaging, labeling, storage container, and transport wrapping.

ISO 7864

Sterile Hypodermic Syringes for Single Use - Part 1: Syringes for Manual Use

Specifies requirements (cleanliness, limits for acidity and alkalinity, limits for extractable metals, lubricant, tolerance on graduated capacity, graduated scale, barrel, piston/plunger assembly, nozzle, performance, packaging, and labeling) for sterile single-use hypodermic syringes made of plastic materials and intended for the aspiration of fluids or for the injection of fluids immediately after filling. Excludes e.g. syringes for use with insulin, and single-use syringes made of glass.

ISO 7886-1

Sterile Hypodermic Syringes for Single Use - Part 2: Syringes for Use with Power-Driven Syringes Pumps

Specifies requirements for sterile single-use hypodermic syringes of nominal capacity 5 ml and above, made of plastics materials and intended for use with power-driven syringe pumps. Does not apply to syringes for use with insulin, single-use syringes made of glass, syringes prefilled with the injection by the manufacturer, and syringes supplied with the injection as a doctors kit.

ISO 7886-2

Infusion Equipment for Medical Use - Part 4: Infusion Sets for Single Use, Gravity Feed

ISO 8536-4

Sterile Single-Use Syringes, With or Without Needle, for Insulin

Specifies requirements and test methods for syringes. Applies to syringes for use with 40 units of insulin/ml (U-40) and 100 units of insulin/ml (U-100). Annexes A, B, C, D, E, F, and G forms an integral part of this standard. Annexes H and J are for information only.

ISO 8537

Stainless Steel Needle Tubing for Manufacture of Medical Devices

Specifies the dimensions, surface and mechanical properties of normal- and thin-walled tubing of designated metric sizes 3.4 mm to 0.3 mm, and of extra-thin-walled tubing of designated metric sizes 2.1 mm to 0.6 mm.

ISO 9626

Sterile, Single-Use Intravascular Catheters - Part 1: General Requirements

Specifies general requirements for intravascular catheters, supplied in the sterile condition and intended for single use, for any application. Does not apply to intravascular catheter accessories, which will be covered by a separate standard.

ISO 10555-1

Sterile, Single-Use Intravascular Catheters - Part 2: Angiographic Catheters

ISO 10555-2

Sterile, Single-Use Intravascular Catheters - Part 3: Central Venous Catheters

ISO 10555-3

Sterile, Single-Use Intravascular Catheters - Part 4: Balloon Dilatation Catheters

ISO 10555-4

Sterile, Single-Use Intravascular Catheters - Part 5: Over-Needle Peripheral Catheters

ISO 10555-5

Sterile, Single-Use Intravascular Catheter Introducers

ISO 11070

National Electrical Manufacturers Association (NEMA)

Digital Imaging and Communications in Medicine (DICOM)

DICOM standards, produced by the American College of Radiology in conjunction with NEMA, enable manufacturers and users of medical imaging equipment to quickly and easily communicate and exchange vital digital image data and associated patient information. Global offers the PS 3 standards on CD-ROM in PDF format to accommodate multiple users and platforms. It is completely indexed for cross-document searching, includes the ability to use keywords to locate information quickly, and cut-and-paste text and images that allows you to move information directly to a working document. You can purchase DICOM standards, including recently released revisions, as a complete set on CD-ROM or in hardcopy. Also available in individual sections.

NEMA PS 3 SET

National Electrical Manufacturers Association (NEMA)

Setting Standards for Excellence

Determination of Signal to Noise Ratio (SNR) in Diagnostic Magnetic Resonance Images

Describes test methods for measuring the signal-to-noise ratio performance of diagnostic magnetic resonance imaging systems under a specific set of conditions, using head and body coils and performing proton imaging.

NEMA MS 1

Determination of Image Uniformity in Diagnostic Magnetic Resonance Images

Defines a test method for measuring image uniformity performance of diagnostic magnetic resonance imaging systems using head and body coils and performing proton imaging. Does not address the use of surface coils, chemical shift imaging, or spectroscopy.

NEMA MS 3

Accoustic Noise Measurement Procedure for Diagnostic Magnetic Resonance Imaging Device

Designed to measure worst-case sound levels a scanner may produce in clinical applications.

NEMA MS 4

Determination of Slice Thickness in Diagnostic Magnetic Resonance Imaging

Describes a method for determining the slice thickness of proton images. Does not address spectroscopy, chemical shift imaging, and warped slices.

NEMA MS 5

Characterization of Special Purpose Coils for Diagnostic Magnetic Resonance Images

Defines test methods for measuring signal-to-noise ratio and image non-uniformity of diagnostic magnetic resonance imaging systems using special purpose coils and performing proton imaging (receive only and transmit receive coils).

NEMA MS 6

Measurement Procedure for Time-Varying Gradient Fields (dB/dt) for Magnetic Resonance Imaging Systems

Describes measurements of the maximum possible time rate of change of gradient magnetic fields on an MR scanner during an exam. From these measurements it is possible to determine whether the system is likely to cause uncomfortable peripheral nerve stimulation in the patient, information that is vital to patient safety.

NEMA MS 7

Characterization of Phased Array Coils for Diagnostic Magnetic Resonance Images

Defines test methods for measuring the signal-to-noise ratio, image uniformity, and image non-uniformity of MR images produced using phased array coils.

NEMA MS 9

Performance Measurements of Scintillation Cameras

Provides a uniform criterion for the measurement and reporting of scintillation camera performance parameters for single and multiple crystal cameras and tomographic devices that image a section or reconstruction image volume, or both.

NEMA NU 1

Performance Measurements of Positron Emission Tomographs

Provides a uniform and consistent method for measuring and reporting performance parameters of positron emission tomographs. Included are time of flight and non time of flight coincidence systems, discrete and continuous detector designs, single and multiple slice devices, and multi-planar and volume reconstruction models.

NEMA NU 2

Digital Imaging and Communications in Medicine (DICOM)

DICOM standards, produced by the American College of Radiology in conjunction with NEMA, enable manufacturers and users of medical imaging equipment to quickly and easily communicate and exchange vital digital image data and associated patient information. Global offers the PS 3 standards on CD-ROM in PDF format to accommodate multiple users and platforms. It is completely indexed for cross-document searching, includes the ability to use keywords to locate information quickly, and cut-and-paste text and images that allows you to move information directly to a working document. You can purchase DICOM standards, including recently released revisions, as a complete set on CD-ROM or in hardcopy. Also available in individual sections.

NEMA PS 3 SET
NEMA PS 3 SET CD

Digital Imaging and Communications in Medicine (DICOM) Part 1: Introduction and Overview

Provides an overview of the entire Digital Imaging and Communications in Medicine (DICOM) Standard. It describes the history, scope, goals, and structure of the standard. In particular, it contains a brief description of the contents of each part of the standard.

NEMA PS 3.1

Digital Imaging and Communications in Medicine (DICOM) Part 2: Conformance

Specifies the purpose and structure of a conformance statement. Describes general conformance requirements that must be met by any implementation claiming conformance to the DICOM Standard.

NEMA PS 3.2

Digital Imaging and Communications in Medicine (DICOM) Part 3: Information Object Definitions

Provides an abstract definition of real world objects applicable to communication of digital medical information.

NEMA PS 3.3

Digital Imaging and Communications in Medicine (DICOM) Part 4: Service Class Specifications

Specifies the set of service class definitions which provide an abstract definition of real world activities applicable to communication of digital medical information.

NEMA PS 3.4

Digital Imaging and Communications in Medicine (DICOM) Part 5: Data Structures and Encoding

Specifies the structure and encoding of data sets.

NEMA PS 3.5

Digital Imaging and Communications in Medicine (DICOM) Part 6: Data Dictionary

Contains the registry of all DICOM data elements and all DICOM unique identifiers that are defined within the DICOM Standard.

NEMA PS 3.6

Digital Imaging and Communications in Medicine (DICOM) Part 7: Message Exchange
Specifies the DICOM Message Service Element (DIMSE).
NEMA PS 3.7

Digital Imaging and Communications in Medicine (DICOM) Part 8: Network Communication Support for Message Exchange
Specifies the services and the upper layer protocols necessary to support the communication of DICOM Application Entities in a networked environment.
NEMA PS 3.8

Digital Imaging and Communications in Medicine (DICOM) Part 10: Media Storage and File Format for Media Interchange
Specifies a general model for the storage of medical imaging information on removable media. It provides a framework allowing the interchange of various types of medical images and related information on a broad range of physical media.
NEMA PS 3.10

Digital Imaging and Communications in Medicine (DICOM) Part 11: Media Storage Application Profiles
Specifies a general model for the storage of medical imaging information on removable media. It enables interoperability by specifying standard sets of elements from the various other parts of the DICOM Standard related to a specific clinical need.
NEMA PS 3.11

Digital Imaging and Communications in Medicine (DICOM) Part 12: Media Formats and Physical Media for Media Interchange
Facilitates the interchange of information between digital imaging computer systems in medical environments. This interchange enhances diagnostic imaging and potentially other clinical applications.
NEMA PS 3.12

Digital Imaging and Communications in Medicine (DICOM) Part 14: Grayscale Standard Display Function
Specifies a standardized display function for the display of grayscale images. Display systems include, for example, monitors with associated driving electronics.
NEMA PS 3.14

Digital Imaging and Communications in Medicine (DICOM) Part 15: Security Profiles
Specifies Security Profiles to which implementations may claim conformance.
NEMA PS 3.15

Digital Imaging and Communications in Medicine (DICOM) Part 16: Content Mapping Resource
Specifies the DICOM Content Mapping Resource (DCMR) which defines the templates and context groups used elsewhere in the standard.
NEMA PS 3.16

Acoustic Output Measurement Standard for Diagnostic Ultrasound Equipment
Describes a set of measurement procedures for ultrasonic output parameters by setting forth definitions of quantities, primarily those relating to acoustic output levels, and specifying standard procedures for measuring the pertinent acoustic output parameters.
NEMA UD 2

Standard for Real Time Display of Thermal and Mechanical Acoustic Output Indices on Diagnostic Ultra Sound Equipment
Enables users to monitor acoustic output display in "real time" during the course of the ultrasound examination. They are intended to provide information to clinical operators so patient exposure to ultrasound may be minimized, while maximizing diagnostic information and ease of use.
NEMA UD 3

Characteristics of and Test Procedures for a Phantom to Benchmark Cardiac Fluoroscopic and Fluorographic Performance
The performance of any medical imaging system can be divided into two categories: (1) suitability of the images for the clinical procedure, and (2) the amount of energy administered the patient while acquiring the images. The phantom and test procedures described test systems under conditions simulating a range of fluoroscopically guided invasive and interventional procedures.
NEMA XR 21

NCCLS

Laboratory Automation: Specimen Container/Specimen Carrier
NCCLS AUTO1-A

Laboratory Automation: Bar Codes for Specimen Container Identification
NCCLS AUTO2-A

Laboratory Automation: Communications with Automated Clinical Laboratory Systems, Instruments, Devices, and Information Systems
NCCLS AUTO3-A

Immunoprecipitin Analyses: Procedures for Evaluating the Performance of Materials
NCCLS DI2-A2

Procedures for the Collection of Arterial Blood Specimens
NCCLS H11-A3

Procedures for the Handling and Processing of Blood Specimens
NCCLS H18-A2

Performance Standards for Antimicrobial Disk Susceptibility Tests
NCCLS M2

Methods for Dilution Antimicrobial Susceptibility Tests for Bacteria That Grow Aerobiacally
NCCLS M7

Methods for Antimicrobial Susceptibility Testing of Anaerobic Bacteria
NCCLS M11-A5

Reference and Selected Procedure for the Erythrocyte Sedimentation Rate (ESR) Test
NCCLS H2-A4

The Institute of Electrical & Electronics Engineers, Inc. (IEEE)

Medical Device Communications Overview and Framework
This IEEE Standards product is part of the 1073 family on Medical Device Communications. An overall definition of the IEEE 1073 family of standards is provided, describing the interconnection and interoperation of medical devices with computerized healthcare information systems in a manner suitable for the clinical environment.
IEEE 1073

Medical Device Communications - Transport Profile - Connection Mode
This IEEE Standards product is part of the 1073 family on Medical Device Communications. A local area network (LAN) for the interconnection of computers and medical devices is defined by the specifications and guidelines set forth in this standard. The functions, features, and protocols of the intra-room communications subnet of a bedside communications network known as the Medical Information Bus (MIB) are defined. This communications subnet is the functional equivalent for the MIB of the Transport, Network, Data Link, and Physical layers of the Organization for International Standards (ISO) Reference Model for Open Systems Interconnection (OSI). This standard defines the services and protocols for the MIB Transport, Network, and Data Link layers.
IEEE 1073.3.1

Standard for Medical Device Communications - Transport Profile - Connection Mode - Amendment 1: Corrections and Clarifications
This IEEE Standards product is part of the 1073 family on Medical Device Communications. This amendment sets forth a number of clarifications and corrections to IEEE Standard for Medical Device Communications - Transport Profile - Connection Mode.
IEEE 1073.3.1A

Medical Device Communications - Transport Profile - IrDA Based - Cable Connected
This IEEE Standards product is part of the 1073 family on Medical Device Communications. A connection-oriented transport profile and physical layer suitable for medical device communications in legacy devices is established. Communications services and protocols consistent with specifications of the Infrared Data Association are defined. These communication services and protocols are optimized for use in patient-connected bedside medical devices.
IEEE 1073.3.2

Medical Device Communications - Physical Layer Interface - Cable Connected
This IEEE Standards product is part of the 1073 family on Medical Device Communications. A physical interface for the interconnection of computers and medical devices in the IEEE 1073 family of standards is defined. This interface is intended to be highly robust in an environment where devices are frequently connected to and disconnected from the network. The physical and electrical characteristics of the connector and signals necessary to exchange digital information between cable-connected medical devices and host computer systems are specified.
IEEE 1073.4.1

Underwriters Laboratories, Inc. (UL)

Standard for Safety of Photographic Equipment
UL 122

Medical and Dental Equipment
UL 544

Medical Electrical Equipment - Part 1: General Requirements for Safety
UL 2601-1

Electrical Equipment for Laboratory Use - Part 2: Particular Requirements for Autoclaves Using Steam for the Treatment of Medical Materials and for Laboratory Processes
UL 61010A-2-041

Electrical Equipment for Laboratory Use - Part 2: Particular Requirements for Autoclaves and Sterilizers Using Toxic Gas for the Treatment of Medical Materials and for Laboratory Processes
UL 61010A-2-042

American Water Works Association (AWWA)

Standard for Steel Water Pipe - 6 In. (150 mm) and Larger
AWWA C200

Coal-Tar Protective Coatings and Linings for Steel Water Pipelines - Enamel and Tape - Hot Applied
AWWA C203

Dimensions for Fabricated Steel Water Pipe Fittings
AWWA C208

Steel Pipe - A Guide for Design and Installation
AWWA M11

American Welding Society (AWS)

Standard Welding Terms and Definitions; Including Terms for Adhesive Bonding, Brazing, Soldering, Thermal Cutting, and Thermal Spraying
Terms you will not find in your regular dictionary. "Adequate definition requires there be only one clearly applicable definition. The definition must accurately reflect the term's use in the welding world." Industry correct and nonstandard terms are both included in this 128-page compilation of over 1,200 definitions.
AWS A3.0

Standard Symbols for Welding, Brazing, and Nondestructive Examination
As a "language," these symbols are the precise means for designers and detailers to place welding, brazing, and nondestructive examination information on drawings and the most error-free means for welding personnel to adhere to original plans.
AWS A2.4

American Welding Society (AWS)

Standard Symbols for Welding, Brazing, and Nondestructive Examination
As a "language," these symbols are the precise means for designers and detailers to place welding, brazing, and nondestructive examination information on drawings and the most error-free means for welding personnel to adhere to original plans.
AWS A2.4

Standard Welding Terms and Definitions; Including Terms for Adhesive Bonding, Brazing, Soldering, Thermal Cutting, and Thermal Spraying
Terms you will not find in your regular dictionary. "Adequate definition requires there be only one clearly applicable definition. The definition must accurately reflect the term's use in the welding world." Industry correct and nonstandard terms are both included in this 128-page compilation of over 1,200 definitions.
AWS A3.0

Specification for Nickel and Nickel Alloy Welding Electrodes for Shielded Metal Arc Welding
AWS A5.11/A5.11M

Specifications for Tungsten and Tungsten Alloy Electrodes for Arc Welding and Cutting
AWS A5.12/A5.12M

Specification for Carbon and Low Alloy Steel Electrodes and Fluxes for Electroslag Welding
AWS A5.25/A5.25M

Structural Welding Code - Steel
The world's best reference for structural steel welding. New material includes both U.S. and metric measurements; new section on responsibilities of personnel; revised design of welded connections; limits of fillet weld length; definition of T-joints, and fatigue limits of weld and joint types; new data on through-thickness base metal loading; clarification on matching filler metals to construction materials; and guidelines for Charpy V-notch testing, and commentary on ultrasonic testing. Engineers, architects and fabricators depend on this book to ensure integrity of welded steel structures. ANSI approved, Dept. of Defense adopted.
AWS D1.1/D1.1M

Structural Welding Code - Aluminum
This code set the rules and regulations necessary for welding structural aluminum using the gas metal arc, gas tungsten arc, and plasma arc welding processes, as well as stud welding and plasma arc gouging, in dynamically loaded or statically loaded nontubular structures as well as tubular structures. Developed under strict American National Standards Institute rules, Structural Welding Code. Aluminum includes sections on Fabrication, Qualification of WPSs, and Personnel and Inspection.
AWS D1.2/D1.2M

Structural Welding Code - Sheet Steel
One of the primary objectives of this code is to define the allowable capacities used in sheet steel applications in which the transfer of calculated load occurs. If you are responsible for the welding of steel decks, panels, storage racks, and stud and joist framing members, to name a few applications; this code helps you to effect consistently sound welding of joints. Includes allowable load capacities, details of welded connections, pre-qualification of WPSs, qualification, inspection, and stud welding. Seven tables, 44 figures, 5 Annexes, and commentary.
AWS D1.3

ASM International (ASM)

Stahlschlussel (Key to Steel)
19th Edition
ASM KEY TO STEEL

ASM Metals Reference Book
ASM METALS REFERENCE BOOK

ASM Handbook Set, Volumes 1 Through 20
ASM METALS HDBK SET

Volumes are also available individually. Call for pricing.

Heat Treating
ASM METALS HDBK V4

Metallography and Microstructures
ASM METALS HDBK V9

ASM Metals Handbook, Desk Edition
ASM METALS HDBK DESK

Worldwide Guide to Equivalent Irons and Steels
ASM WWDG IRONS & STEELS

Worldwide Guide to Equivalent Nonferrous Metals and Alloys
Fourth Edition
ASM WWDG NONFERROUS

ASTM International (ASTM)

Annual Book of ASTM Standards - Complete Set
77 Volume Set
ASTM SET

ASTM International (ASTM)

Metals and Alloys in the Unified Numbering System (UNS)
The UNS 9th Edition contains more than 4,600 Metals and Alloy Designations - including 500 New and Revised since the 1993 edition. UNS designations include a description of the material, its chemical composition, and applicable cross-reference specifications from societies, trade associations, and government. Each UNS designation consists of a single-letter prefix followed by five digits (for example S17400).
ASTM DS 56
ASTM DS 56 CD

Handbook of Comparative World Steel Standards
This helpful handbook lets you compare steel standards from several countries at a glance, including ANSI, ASTM, AS, API, BSI, CSA, DIN, JIS, and ISO. Each standard lists country, standard number and year, grade, chemical composition, and mechanical properties. Includes CD-ROM. Second Edition.
ASTM DS 67

ASTM Book of Standards

Annual Book of ASTM Standards - Complete Set
Please see page 7 for a complete description.
ASTM SET

Section 1- Iron and Steel Products
ASTM SECTION 1

Section 2- Nonferrous Metal Products
ASTM SECTION 2

Section 3- Metals Test Methods and Analytical Procedures
ASTM SECTION 3

Listed below are some of the most popular individual ASTM standards found in Sections 1, 2 & 3.

Standard Specification for Carbon Structural Steel
ASTM A 36/A 36M

Standard Specification for Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service
ASTM A 193/A 193M

Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
ASTM A 240/A 240M

Standard Specification for Stainless Steel Bars and Shapes
ASTM A 276

Standard Test Methods and Definitions for Mechanical Testing of Steel Products
ASTM A 370

Standard Specification for Chemical Passivation Treatments for Stainless Steel Parts
ASTM A 967

Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel
ASTM B 633

Standard Test Methods for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials
ASTM E 18

Standard Hardness Conversion Tables for Metals Relationship Among Brinell Hardness, Vickers Hardness, Rockwell Hardness, Superficial Hardness, Knoop Hardness, and Scleroscope Hardness
ASTM E 140

Practice for Liquid Penetrant Examination
ASTM E 1417

British Standards Institution (BSI)

Specification for Wrought Steels for Mechanical and Allied Engineering Purposes Part 1. General Inspection and Testing Procedures and Specific Requirements for Carbon Manganese, Alloy and Stainless Steels
BS 970 P1

Copper and Copper Alloys - Ingots and Castings
BS EN 1982

Metallic Materials - Tensile Testing - Part 1. Method of Test at Ambient Temperature
BS EN 10002-1

Stainless Steels - Part 1. List of Stainless Steels
BS EN 10088-1

Metallic Products - Types of Inspection Documents
BS EN 10204

Technical Delivery Conditions for Steel Castings for Pressure Purposes - Part 2. Steel Grades for use at Room Temperature and at Elevated Temperature
BS EN 10213-2

Deutsches Institut fur Normung, e.V. (DIN)

Seamless Precision Steel Tubes: Dimensions
DIN 2391 P1

Technical Delivery Conditions for Stainless Steel Plate, Hot Rolled Strip, and Bars for Pressure Purposes, Drawn Wire and Forgings
DIN 17440

Electroplated Coatings; Zinc and Cadmium Coatings on Iron and Steel Chromate Treatment of Zinc and Cadimum Coatings
DIN 50961

Founding - Spheroidal Graphite Cast Iron
DIN EN 1563

Aluminium and Aluminium Alloys - Castings - Chemical Composition and Mechanical Properties
DIN EN 1706

Inspection Documents for Metallic Products
DIN EN 10204

Iron and Steel - Dimensional Standards
DIN HDBK 28

International Organization for Standardization (ISO)

Metallic Materials - Vickers Hardness Test - Part 1: Test Method
ISO 6507-1

Metallic Materials - Rockwell Hardness Test - Part 1: Test Method (Scales A, B, C, D, E, F, G, H, K, N, T)
ISO 6508-1

Metallic Materials - Rockwell Hardness Test - Part 2: Verification and Calibration of Testing Machines (Scales A, B, C, D, E, F, G, H, K, N, T)
ISO 6508-2

Metallic Materials - Tensile Testing
ISO 6892

Steel and Steel Products - Inspection Documents
ISO 10474

Japanese Standards Association (JSA)

Ferrous Materials and Metallurgy Handbook - Volume 1
Provides test methods common to metallic materials, general rules for inspection and test methods of steel, and alloy steel for machine structural use, and steel for special purposes.
JIS FERROUS 1

Ferrous Materials and Metallurgy Handbook - Volume 2
Includes standards for steel bars, sections, plates, sheets and strip, steel tubular products, wire rods, and their secondary products.
JIS FERROUS 2

Japanese Standards Association (JSA)

JIS Metal Materials Data Handbook
JIS METALS DATA BOOK

Ferrous Materials and Metallurgy Handbook - Volume 1
Provides test methods common to metallic materials, general rules for inspection and test methods of steel, and alloy steel for machine structural use, and steel for special purposes.
JIS FERROUS 1

Ferrous Materials and Metallurgy Handbook - Volume 2
Includes standards for steel bars, sections, plates, sheets and strip, steel tubular products, wire rods, and their secondary products.
JIS FERROUS 2

JIS Non-Ferrous Metals and Metallurgy Handbook
Provides a glossary of terms, test methods of non-ferrous metals and metallurgy, raw materials, wrought copper, aluminum and aluminum alloy, other metal than copper and aluminum and its alloy, functional materials, powder metallurgy, casting, secondary products and miscellaneous materials for electric use, and miscellaneous references.
JIS NON FERROUS

Military Specifications and Standards

Anodic Coatings, for Aluminum and Aluminum Alloys
MIL-A-8625

Chemical Conversion Coatings on Aluminum and Aluminum Alloys
MIL-C-5541

Coating, Oxide, Black, for Ferrous Metal
MIL-DTL-13924

Finishing of Metal and Wood Surfaces
MIL-STD-171

SAE International (SAE)

Inspection Material, Penetrant
SAE AMS 2644

Steel, Corrosion and Heat Resistant, Sheet, Strip, and Plate 15CR - 25.5NI - 1.2MO - 2.1TI - 0.006B - 0.30V 1800 Degrees F (982 Degrees C) Solution Heat Treated
SAE AMS 5525

Steel, Corrosion-Resistant, Bars, Wire, Forgings, Rings, and Extrusions 13CR - 8.0NI - 2.2MO - 1.1AL Vacuum Induction Plus Consumable Electrode Melted Solution Heat Treated, Precipitation Hardenable
SAE AMS 5629

Steel, Corrosion and Heat-Resistant, Bars, Wire, Forgings, and Tubing 15CR - 25.5NI - 1.2MO - 2.1TI - 0.006B - 0.30V Consumable Electrode Melted 1650 Degrees F (899 Degrees C) Solution and Precipitation Heat Treated
SAE AMS 5737

Anodic Coatings for Aluminum and Aluminum Alloys
SAE AMS-A-8625

Heat Treatment of Steel, Process for
SAE AMS-H-6875

Passivation Treatments for Corrosion-Resistant Steel
SAE AMS-QQ-P-35

Plating, Cadmium (Electrodeposited)
SAE AMS-QQ-P-416

The Aluminum Association (AA)

Aluminum Design Manual: Specifications and Guidelines for Aluminum Structures
For those who work with aluminium structural applications, this update-to-date resource includes: Specification and Commentary on Allowable Stress Design, Load and Resistance Factor Design for Aluminum Structures, Design Guide, Materials, Material Properties, Section Properties, Design Aids, Illustrative Design Examples, and Guidelines for Aluminum Sheet Metal Work in Building Construction.
AA ADM1

Aluminum Standards and Data
Aluminum Standards and Data contains information and data on: nominal and specified chemical compositions of alloys; mechanical and physical properties of commercial alloys; mechanical property limits; information on comparative corrosion performance; and dimensional tolerances for semi-fabricated products. Improvements to this edition include: modified tolerance tables with "how to" descriptions to simplify interpretations of tables; improved and simplified text; and footnotes.
AA ASD1

Aluminum Standards and Data - Metric
AA ASD1M

Alloy and Temper Designation Systems for Aluminum
Covers systems for designation wrought aluminum and wrought aluminum alloys, aluminum and aluminum alloys in the castings and foundry ingot and the tempers in which wrought products and castings are produced.
ANSI H35.1

Alloy and Temper Designation Systems for Aluminum (Metric)
ANSI H35.1M

Dimensional Tolerances for Aluminum Mill Products
Includes dimension tolerances for aluminum mill products accepted by both the aluminum industry and users of the metal. They are the basis of dimensional tolerance specified in government, technical societies, and other specifications for aluminum.
ANSI H35.2

Dimensional Tolerances for Aluminum Mill Products (Metric)
ANSI H35.2M

American National Standards Institute (ANSI)

Walk-Behind Mowers and Ride-On Machines with Mowers - Safety Requirements
ANSI B71.1

Commercial Turf Care Equipment - Safety Specifications
ANSI B71.4

Prescription Ophthalmic Lenses Recommendations
ANSI Z80.1

Respiratory Protection
ANSI Z88.2

Safety Glazing Materials Used in Buildings Safety
ANSI Z97.1

Hazardous Industrial Chemicals Precautionary Labeling
ANSI Z129.1

Hazardous Industrial Chemicals - Material Safety Data Sheets - Preparation
ANSI Z400.1

American Society of Safety Engineers (ASSE)

Occupational and Educational Eye and Face Protection
ANSI Z87.1

American Society of Safety Engineers (ASSE)

Safety Requirements for Workplace Floor and Wall Openings, Stairs and Railing Systems
ANSI A1264.1

Standard for Provision of Slip Resistance on Walking and Working Surfaces
ANSI A1264.2

Occupational and Educational Eye and Face Protection
ANSI Z87.1

Safety Requirements for Confined Spaces
ANSI Z117.1

Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components
ANSI Z359.1

Accepted Practices for Hydrogen Sulfide Safety Training Programs
ANSI Z390.1

Criteria for Accepted Practices in Safety, Health, and Environmental Training
ANSI Z490.1

ASME International (ASME)

Safety Standard for Low Lift & High Lift Trucks
ASME B56.1

Safety Standard for Platform Lifts and Stairway Chairlifts Fittings
ASME A18.1

British Standards Institution (BSI)

Occupational Health and Safety Management Systems
BS 8800

Occupational Health and Safety Management Systems - Specification
BS OHSAS 18001

Occupational Health and Safety Management Systems - Guidelines for the Implementation of OHSAS 18001
BS OHSAS 18002

Safety of Machinery - Principles for Risk Assessment
BS EN 1050

Safety of Machinery - Electrical Equipment of Machines - Part 1: Specification for General Requirements
BS EN 60204-1

Medical Electrical Equipment - Part 1: General Requirements for Safety
BS EN 60601-1

Safety of Laser Products - Part 1: Equipment Classification, Requirements and User's Guide
BS EN 60825-1

Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements
BS EN 61010-1

International Organization for Standardization (ISO)

Part 1: Classification of Air Cleanliness
ISO 14644-1

International Organization for Standardization (ISO)

Part 1: Classification of Air Cleanliness
ISO 14644-1

Part 2: Specifications for Testing and Monitoring to Prove Continued Compliance with ISO 14644-1
ISO 14644-2

Part 4: Design, Construction and Start-Up
ISO 14644-4

Laser Institute of America (LIA)

Lasers, Safe Use of
ANSI Z136.1

Laser Institute of America (LIA)

Lasers, Safe Use of
ANSI Z136.1

Safe Use of Optical Fiber Communications Systems Utilizing Laser Diode and LED Sources
ANSI Z136.2

Safe Use of Lasers in Health Care Facilities
ANSI Z136.3

American National Standard for Safe Use of Lasers in Educational Institutions
ANSI Z136.5

Safe Use of Lasers Outdoors
ANSI Z136.6

National Fire Protection Association (NFPA)

Life Safety Code
NFPA 101

National Fire Protection Association (NFPA)

Standard for Portable Fire Extinguishers
NFPA 10

Carbon Dioxide Extinguishing Systems
NFPA 12

Recommended Practice for Electrical Equipment Maintenance
NFPA 70B

Electric Safety Requirements for Employee Workplaces
NFPA 70E

Static Electricity
NFPA 77

Electrical Standard for Industrial Machinery
NFPA 79

Life Safety Code
NFPA 101

Alternative Approaches to Life Safety
NFPA 101A

Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire
NFPA 2112

Selection, Care, Use and Maintenance of Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire
NFPA 2113

National Safety Council (NSC)

Personal Protection - Protective Footwear
ANSI Z41

National Safety Council (NSC)

Safety Requirements for Material Hoists - Construction and Demolition Operations
ANSI A10.5

Safety Requirements for Scaffolding
ANSI A10.8

Construction and Demolition Operations - Requirements for Safety Belts, Harnesses, Lanyards and Lifelines for Construction and Demolition Use
ANSI A10.14

Information Management for Occupational Safety and Health
ANSI Z16.2

Personal Protection - Protective Footwear
ANSI Z41

American Petroleum Institute (API)

Global Engineering Documents®, is the primary worldwide distributor of API Standards and Publications. API has developed equipment and operating standards used around the world and covers everything from drilling equipment to environmental protection. Federal and state laws and regulations have long referenced API standards.

American Petroleum Institute (API)

Manual of Petroleum Measurement Standards - Complete Set (Excluding Chapters 11 and 19, these chapters are only available individually)

The Institute currently maintains a comprehensive API Manual of Petroleum Measurement Standards. This manual is an ongoing project, as new chapters and revisions of old chapters will be released periodically. Publications regarding measurement of evaporative loss are now listed under Chapter 19 of the Manual of Petroleum Measurement Standards. The price of the complete set is subject to change as new chapters and subchapters are released; an order for one complete set would not include the chapters published after the release date of this catalog (but prior to order receipt), and the binders. NOTE: Chapter 11 and Chapter 19 standards must be ordered separately.
API MPMS SET

Joint Association Survey on Drilling Costs

This annual report is the only long-term source of information on detailed U.S. drilling expenditures. The survey, conducted since 1959, presents information on wells, footage, and related expenditures for each active drilling area. Data for oil wells, gas wells, and dry holes are reported separately and the information is further desegregated by depth interval for each state and area. Similar summary tables are provided for the offshore and onshore areas. Also included in the report are sections on drilling expenditures for exploratory and development wells, horizontal wells, and coal-bed methane gas wells. A comparison of the impact of price change on the drilling costs is also included.
API JOINT ASSOCIATION

Manual of Petroleum Measurement Standards - Complete Set (Excluding Chapters 11 and 19, these chapters are only available individually)

The Institute currently maintains a comprehensive API Manual of Petroleum Measurement Standards. This manual is an ongoing project, as new chapters and revisions of old chapters will be released periodically. Publications regarding measurement of evaporative loss are now listed under Chapter 19 of the Manual of Petroleum Measurement Standards. The price of the complete set is subject to change as new chapters and subchapters are released; an order for one complete set would not include the chapters published after the release date of this catalog (but prior to order receipt), and the binders. NOTE: Chapter 11 and Chapter 19 standards must be ordered separately.
API MPMS SET

Welding of Pipelines and Related Facilities

Covers gas and arc welding for the production of high-quality welds in carbon and low-alloy steel piping used in the compression, pumping, and transmission of crude petroleum, petroleum products, and fuel gases where applicable to distribution systems.
API STD 1104

Welded Steel Tanks for Oil Storage

Covers material, design, fabrication, erection, and testing requirements for vertical, cylindrical, aboveground, closed- and open-top, welded steel storage tanks in various sizes and capacities for internal pressures approximating atmospheric pressure (internal pressures not exceeding the weight of the roof plates), but a higher internal pressure is permitted when additional requirements are met. This standard applies only to tanks whose entire bottom is uniformly supported and to tanks in non-refrigerated service that have a maximum operating temperature of 200°F.
API STD 650

Tank Inspection, Repair, Alteration & Reconstruction

Covers the inspection, repair, alteration and reconstruction of steel aboveground storage tanks used in the petroleum and chemical industries. Provides the minimum requirements for maintaining the integrity of welded or riveted, nonrefrigerated, atmospheric pressure, aboveground storage tanks after they have been placed in service.
API STD 653

Specification for Casing & Tubing

Covers seamless and welded casing and tubing, couplings, pup joints, and connectors in all grades in U.S. customary units. Process of manufacture; chemical and mechanical property requirements; methods of testing; and dimensions are included.
API SPEC 5CT

Fitness-For-Service

Describes standardized fitness-for-service assessment techniques for pressurized equipment used in the petrochemical industry. Fitness-for-service is defined as the ability to demonstrate the structural integrity of an in-service component containing a flaw. This publication is intended to supplement the requirements in API 510, 570, and 653 by: (1) ensuring safety of plant personnel and the public while older equipment continues to operate; (2) providing technically sound fitness-for-service assessment procedures to ensure that different service providers furnish consistent life predictions; and (3) helping optimize maintenance and operation of existing facilities to maintain the availability of older plants and enhance their long-term economic viability. The assessment procedures in this publication can be used for fitness-for-service evaluation and operating of pressure vessels designed and constructed to the ASME Boiler and Pressure Vessel Code; piping systems designed and constructed to the ASME B31.3 Piping Code; and aboveground storage tanks designed and constructed to API 650 and 620. The assessment procedures cover the present integrity of pressure containing equipment given a current state of damage and the projected remaining life. This publication can also be applied to pressure containing equipment constructed to other recognized codes and standards as defined in this publication. States that reference or have adopted API Codes 510, 570, and 653 are noted.
API RP 579

Base Resource Document On Risk-Based Inspection

API has researched and developed an approach to risk-based inspection (RBI). This document details the procedures and methodology of RBI. RBI is an integrated methodology that uses risk as a basis for prioritizing and managing an in-service equipment inspection program by combining both the likelihood of failure and the consequence of failure. Utilizing the output of the RBI, the user can design an inspection program that manages or maintains the risk of equipment failures. The following are three major goals of the RBI program: (1) provide the capability to define and quantify the risk of process equipment failure, creating an effective tool for managing many of the important elements of a process plant; (2) allow management to review safety, environmental, and business-interruption risks in an integrated, cost-effective manner; and (3) systematically reduce the likelihood and consequence of failure by allocating inspection resources to high-risk equipment. The RBI methodology provides the basis for managing risk, by making informed decisions on the inspection method, coverage required and frequency of inspections. In most plants, a large percent of the total unit risk will be concentrated in a relatively small percent of the equipment items. These potential high-risk components may require greater attention, perhaps through a revised inspection plan. With an RBI program in place, inspections will continue to be conducted as defined in existing working documents, but priorities and frequencies will be guided by the RBI procedure. The RBI analysis looks not only at inspection, equipment design, and maintenance records, but also at numerous process safety management issues and all other significant issues that can affect the overall mechanical integrity and safety of a process unit.

API PUBL 581

Design & Construction of Large, Welded, Low - Pressure Storage Tanks

Covers the design and construction of large, welded, low-pressure carbon steel aboveground storage tanks (including flat-bottom tanks) that have a single vertical axis of revolution. The tanks described are designed for metal temperatures not greater than 250^{o}F and with pressures in their gas or vapor spaces not more than 15 psig.

API STD 620

Specification for Line Pipe

Provides standards for pipe suitable for use in conveying gas, water and oil in both the oil and natural gas industries. Covers seamless and welded steel line pipe, including standard-weight and extra-strong threaded line pipe; and standard-weight plain-end, regular-weight plain-end, special plain-end, extra-strong plain-end, and double-extra-strong plain-end pipe; as well as bell and spigot and through-flowing (TFL) pipe.

API SPEC 5L

Specification for Wellhead & Christmas Tree Equipment

Wellhead and Christmas Tree Equipment covers equipment utilized for pressure control systems for production of oil and gas. Specific equipment covered by this specification includes end and outlet connectors; ring gaskets; chokes; valves including surface and under water safety valves; actuators; and wellhead and Christmas Tree equipment.

API SPEC 6A

Specification for Rotary Drill Stem Elements

Covers dimensional requirements on drill stem members (except drill pipe), including threaded connections, gauging practice, and master gauges.

API SPEC 7

Recommended Practice for Analysis, Design, Installation & Testing of Basic Surface Safety Systems for Offshore Production Platforms

Presents a standarized method to design, install, and test surface safety systems on offshore production platforms.

API RP 14C

Classification of Locations for Electrical Installation at Petroleum Facilities Classified as Class I, Division 1 & Division 2

Provides guidelines for determining the degree and extent of Class I, Division 1 and Class I, Division 2 locations at petroleum facilities, for the selection and installation of electrical equipment.

API RP 500

Managing System Integrity for Hazardous Liquid Pipelines

Outlines a process that an operator of a pipeline system can use to assess risks and make decisions about risks in operating a hazardous liquid pipeline in order to reduce both the number of incidents and the adverse effects of errors and incidents.

API STD 1160

Recommended Practice for Planning, Designing & Constructing Fixed Offshore Platforms - Load & Resistance Factor Design

This standard contains engineering design principles and practices using LRFD design criteria for development of offshore oil resources. The LRFD provisions have been developed from the WSD provisions using reliability-based calibration. Contains the full text of ISO 13819, Part 2.

API RP 2A-LRFD

Planning, Designing & Constructing Fixed Offshore Platforms - Working Stress Design

Contains engineering design principles and practices that have evolved during the development of offshore oil resources. Metric conversions of customary English units are provided throughout the text and are shown in parentheses.

API RP 2A-WSD

Operation and Maintenance of Offshore Cranes

This standard covers recommendations for developing safe operating practices and procedures compatible with operation of pedestal-mounted revolving cranes used offshore on bottom-supported platforms, floating drilling tenders, semi-submersible rigs, and other types of floating drilling equipment.

API RP 2D

Threading, Gauging & Thread Inspection of Casing Tubing, and Line Pipe Threads

This standard covers dimensions and marking requirements for API master thread gauges. Additional product threads and thread gauges, as well as instruments and methods for the inspection of threads for line pipe, round thread casing, buttress casing, and extreme-line casing connections are included.

API SPEC 5B

Drill Pipe

API Spec 5D covers Groups 1 and 3 drill pipe; specifically, those in certain designations and wall thicknesses.

API SPEC 5D

Pipeline Valves
Pipeline Valves covers flanged and butt-welding gate, plug, ball, and check valves. This specification clarifies the types, categories and bore sizes of valves covered; adjusts test and marking requirements accordingly; simplifies the dimensional table for gate valves; adds metric conversions of all dimensional tables; and includes other clarifications and updates.
API SPEC 6D

Drill Stem Design and Operating Limits
Includes recommendations for the design and selection of drill string members and include considerations of hole angle control, drilling fluids, weight, and rotary speed.
API RP 7G

Design and Installation of Offshore Production Platform Piping Systems
This standard recommends minimum requirements and guidelines for the design and installation of new piping systems on offshore production platforms. Includes general recommendations on design and application of pipe, valves, and fittings for typical processes; general information on installation, quality control, and items related to piping systems such as insulation; and specific recommendations for the design of particular piping systems.
API RP 14E

Design and Installation of Electrical Systems for Fixed and Floating Offshore Petroleum Facilities for Unclassified and Class I, Division 1 and Division 2 Locations
This standard recommends minimum requirements for design and installation of electrical systems for offshore production platforms. Includes recommendations on electrical equipment for classified areas, power generating stations, distribution systems, motors, transformers, lighting, DC power systems, and recommendations on systems checkout.
API RP 14F

Blowout Prevention Equipment Systems for Drilling Wells
This standard provides information that can serve as a guide for installation and testing of blowout prevention equipment systems on land and marine drilling rigs (barge, platform, bottom-supported, and floating).
API RP 53

Pressure Vessel Inspection Code: Maintenance Inspection, Rating, Repair & Alteration
Covers the maintenance inspection, repair, alteration, and rating procedures for pressure vessels used by the petroleum and chemical process industries. Applies to vessels that have been placed in service and have been inspected by an authorized inspection agency or repaired by a repair organization.
API 510

Part I - Sizing and Selection
Applies to the sizing and selection of pressure relief devices for equipment that has a maximum allowable working pressure (MAWP) of 15 psig (103 kPag) or greater.
API RP 520 P1

Part II - Installation
Please see page 21 for a complete description.
API RP 520 P2

Guide for Pressure - Relieving & Depressuring Systems
A guide for plant engineers in the design, installation, and operation of pressure-relieving and depressuring systems.
API RP 521

Fired Heaters for General Refinery Services
Applies to fired heaters for general refinery services. It covers the minimum requirements for their design, materials, fabrication, inspection, testing, preparation for shipment, and erection.
API STD 560

Piping Inspection Code: Inspection, Repair, Alteration, & Rerating of In-Service Piping Systems
Covers inspection, repair alterations, and rerating procedures for in-service metallic piping systems. Establishes requirements and guidelines that allow owner/users of piping systems to maintain the safety and mechanical integrity of systems after they have been placed into service.
API 570

Inspection of Pressure Vessels (Towers, Drums, Reactors, Heat Exchangers, & Condensers)
Covers the inspection of pressure vessels. It includes a description of the various types of pressure vessels and the standards that can be used for their construction and maintenance. The reasons for inspection, the causes of deterioration, the frequency and methods of inspection, the methods of repair, and the preparation of records and reports are also covered. Safe operation is emphasized.
API RP 572

Inspection Practices for Piping System Components
This standard covers inspection practices for piping, tubing, valves (not including control valves), and fittings used in petroleum refineries and chemical plants. Although not specifically intended to cover speciality items, many of the inspection methods described are applicable to items such as control valves, level gages, and instrument control columns.
API RP 574

Inspection of Atmospheric and Low-Pressure Storage Tanks
This standard covers the maintenance, inspection, repair, alteration, and operating procedures for pressure vessels used by the petroleum and chemical process industries. Applies to vessels that have been placed in service and covers the inspection of atmospheric and low-pressure storage tanks that are designed to operate at pressures from atmospheric to 15 psig. Includes reasons for inspection, frequency and methods of inspection, methods of repair, and preparation of records and reports. This recommended practice is intended to supplement API Standard 653, which covers the minimum requirements for maintaining the integrity of storage tanks after they have been placed in service.
API RP 575

Inspection of Pressure Relieving Devices
This standard describes automatic pressure-relieving devices commonly used in the oil and petrochemical industries. As a guide to the inspection and control of these devices in the user's plant, it is intended to ensure their proper performance. Covers such automatic devices as spring-loaded pressure relief valves, pilot-operated valves, and rupture disks.
API RP 576

Steel Gate Valves - Flanged & Butt-Welding Ends, Bolted & Pressure Seal Bonnets
This standard is for the convenience of purchasers and manufacturers who order, fabricate, or install steel gate valves. Covering steel gate valves with flanged or butt-welding ends in sizes NPS1 through NPS 24.
API STD 600

Centrifugal Pumps for General Refinery Services
Including the minimum requirements for centrifugal pumps, covering pumps running in reverse as hydraulic power recovery turbines, for use in petroleum, heavy-duty chemicals, and gas industry services. The pump types covered by this standard can be broadly classified as overhung, between bearings, and vertically suspended.
API STD 610

Lubrication, Shaft-Sealing, and Control-Oil Systems and Auxiliaries for Petroleum, Chemical, and Gas Industry Services
This standard covers the minimum requirements for special-purpose and general-purpose lubrication systems, oil-type, and dry gas seal shaft-sealing support systems. Such systems may serve compressors, gears, pumps, and drivers. The standard includes the systems' components, along with the required controls and instrumentation. Data sheets and typical schematics of both system components and complete systems are also provided. Chapters include General Requirements, Special Purpose Oil Systems, General Purpose Oil Systems, and Dry Gas Seal Module Systems.
API STD 614

Axial and Centrifugal Compressors and Expander - Compressors for Petroleum, Chemical and Gas Industry Services
This standard covers the minimum requirements for centrifugal compressors used in petroleum, chemical, and gas industry services that handle air or gas. Does not apply to fans or blowers that develop less than 34 kPa (5 pounds per square inch) pressure rise above atmospheric pressure; these are covered by API Standard 673. This standard also does not apply to packaged, integrally-geared centrifugal air compressors, which are covered by API Standard 672.
API STD 617

Air-Cooled Heat Exchangers for General Refinery Services
This standard provides a purchase specification for purchasers and vendors of air-cooled heat exchangers for use in refinery service. It requires the purchaser to specify certain details and features covering the minimum requirements for design, materials, fabrication, inspection, testing, and preparation for shipment of refinery process air-cooled heat exchangers. These requirements are specifically for the forced or induced type of heat exchangers.
API STD 661

Machinery Protection Systems
Provides a purchase specification to facilitate the manufacture, procurement, installation, and testing of vibration, axial position, and bearing temperature monitoring systems for petroleum, chemical, and gas industry services. Covers the minimum requirements for monitoring radial shaft vibration, casing vibration, shaft axial position, and bearing temperatures. It outlines a standardized monitoring system and covers requirements for hardware (sensors and instruments), installation, testing, and arrangement.
API STD 670

Pumps - Shaft Sealing Systems for Centrifugal and Rotary Pumps
Establishes the minimum electromechanical requirements for sealing systems for centrifugal and rotary pumps with seal sizes from 30 millimeters to 120 millimeters (1.5 inches to 4.5 inches). It also provides a standard seal design that has been tested and qualified under the service conditions for which it is intended to operate. In addition, this standard encourages evolving technology through qualification testing, data sheet input, and for engineered seals.
API STD 682

Rotor Repair
This recommended practice covers the minimum requirements for the inspection and repair of special purpose rotating equipment rotors, bearings, and couplings used in petroleum, chemical, and gas industry service.
API RP 687

Venting Atmospheric & Low-Pressure Storage Tanks - Nonrefrigerated and Refrigerated
This standard covers the normal and emergency vapor venting requirements for aboveground liquid petroleum or petroleum products storage tanks, and aboveground and underground refrigerated storage tanks designed for operating at pressures from vacuum through 15 pounds per square inch gauge (1.034 bar gauge).
API STD 2000

Protection Against Ignitions Arising Out of Static, Lightning & Stray Currents
Described in this publication are some of the conditions that have resulted in fires caused by electrical sparks and arcs from natural causes, as well as the methods that the petroleum industry is currently applying to prevent ignitions from these sources.
API RP 2003

Safe Entry and Cleaning of Petroleum Storage Tanks
This standard provides safety practices for preparing, emptying, isolating, ventilating, atmospheric testing, cleaning, entry, hot work, and recommissioning activities in, on, and around atmospheric and low-pressure (up to and including 15 psig) aboveground storage tanks that have contained flammable, combustible, or toxic materials. This standard directs the user from decommissioning (removal from service) through recommissioning (return to service). This standard applies to stationary tanks used in all sectors of the petroleum and petrochemical plants, and terminals.
API STD 2015

Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks
This recommended practice supplements the requirements of ANSI/API Standard 2015, Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks, Sixth Edition. This RP provides guidance and information on the specific aspects of tank cleaning, in order to assist employers (owners/operators and contractors) to conduct safe tank cleaning operations in accordance with the requirements of ANSI/API Standard 2015.
API RP 2016

Temperature Determination
This standard covers the sampling, reading, averaging, and rounding of the temperature of liquid hydrocarbons in both the static and dynamic modes of measurement for volumetric purposes.
API MPMS 7

American Water Works Association (AWWA)

Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
AWWA C111

Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges
AWWA C115

Thickness Design of Ductile-Iron Pipe
AWWA C150

API Inspector Certification Programs

API's standards-based Inspector Certification Programs offer individuals a means to improve skills, enhance job performance, and provide a uniform national platform serving as the model for many state and local government regulations. There are three Inspector Certification Programs with examinations administered twice annually. Please note that document revisions used for exams are not always the most current revisions available.

Pressure Vessel Inspector Certification Examination
Includes the exam required revisions for the following documents: API CERT 510, API CERT 572, API CERT 576, and API CERT GUIDE IRE CH2.
API CERT 510 PROGRAM

Ask about API CERT 510 ASME for ASME sections that apply for the exam.

Authorized Piping Inspector Certification Examination
Includes the exam required revisions for the following documents:API CERT 570 and API CERT 574.
API CERT 570 PROGRAM

Ask about API CERT 570 ASME for ASME sections that apply for

Aboveground Storage Tank Inspector Certification Examination
Includes the exam required revisions for the following documents:API CERT 575, API CERT 650, API CERT 651, API CERT 652, API CERT 653, API CERT 2015, and API CERT 2207.
API CERT 653 PROGRAM

Ask about API CERT 653 ASME for ASME sections that apply for the exam.

ASME International (ASME)

Scheme for Identification of Piping Systems
This standard is intended to establish a common system to assist in identification of hazardous materials conveyed in piping systems and their hazards when released in the environment. This scheme concerns identification of contents of piping systems in industrial and power plants. It is also recommended for the identification of piping systems used in commercial and institutional installations, and in buildings used for public assembly. It does not apply to pipes buried in the ground nor to electrical conduits.
ANSI A13.1

Pipe Threads, General Purpose (Inch)
Covers dimensions and gaging of pipe threads for general purpose applications.
ANSI B1.20.1

Valves - Flanged, Threaded, and Welding Ends
Applies to new valve construction and covers pressure-temperature ratings, dimensions, tolerances, materials, nondestructive examination requirements, testing, and marking for cast, forged, and fabricated flanged, threaded, and welding end, and wafer or flangeless valves of steel, nickel-base alloys, and other alloys.
ANSI B16.34

Large Metallic Valves for Gas Distribution
Manually Operated, NPS 2 1/2 to 12, 125 psig Maximum.
ANSI B16.38

Pipe Flanges & Flanged Fittings
Covers pressure-temperature ratings, materials, dimensions, tolerances, marking, testing, and methods of designating openings for pipe flanges and flanged fittings in sizes NPS 1/2 through NPS 24 and in rating Classes 150, 300, 400, 600, 900, 1500, and 2500. Flanges and flanged fittings may be cast, forged, or (for blind flanges and certain reducing flanges only) plate materials as listed in Table 1A. Requirements and recommendations regarding bolting and gaskets are also included.
ANSI B16.5

Power Piping
Prescribes minimum requirements for the design, materials, fabrication, erection, test, and inspection of power and auxiliary service piping systems for electric generation stations, industrial institutional plants, central and district heating plants. Includes Code Case #25.
ASME B31.1

Process Piping
ASME B31.3

Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia and Alcohols
Prescribes requirements for the design, materials, construction, assembly, inspection, and testing of piping transporting liquids such as crude oil, condensate, natural gasoline, natural gas liquids, liquefied petroleum gas, carbon dioxide, liquid alcohol, liquid anhydrous ammonia, and liquid petroleum products between producers' lease facilities, tank farms, natural gas processing plants, refineries, stations, ammonia plants, terminals (marine, rail and truck) and other delivery and receiving points.
ASME B31.4

Gas Transmission and Distribution Piping Systems
Covers the design, fabrication, installation, inspection, testing, and safety aspects of operation and maintenance of gas transmission and distribution systems, including gas pipelines, gas compressor stations, gas metering and regulation stations, gas mains, and service lines up to the outlet of the customers meter set assembly.
ASME B31.8

ASTM International (ASTM)

Steel-Piping, Tubing, Fittings
Please see page 7 for a complete description.
ASTM 01.01

Ferrous Castings; Ferroalloys
Please see page 7 for a complete description.
ASTM 01.02

Wear and Erosion; Metal Corrosion
Please see page 8 for a complete description.
ASTM 03.02

Petroleum Products and Lubricants (I): D 56 - D 3230
Please see page 10 for a complete description.
ASTM 05.01

Petroleum Products and Lubricants (II): D 3231- D 5302
Please see page 10 for a complete description.
ASTM 05.02

Petroleum Products and Lubricants (III): D 5303 - D 6334
Please see page 10 for a complete description.
ASTM 05.03

Petroleum Products and Lubricants (IV): D 6335 - latest
Please see page 11 for a complete description.
ASTM 05.04

Test Methods for Rating Motor, Diesel, and Aviation Fuels; Catalysts; Manufactured Carbon, and Graphite Products
Please see page 11 for a complete description.
ASTM 05.05

Gaseous Fuels; Coal, and Coke
Please see page 11 for a complete description.
ASTM 05.06

Save 25% when you order all of Section 5. Receive all of Section 5 (Volumes 05.01 - 05.06), 789 Standards.

Canadian Standards Association (CSA)

Steel Line Pipe - Oil & Gas Industry Systems & Materials
CSA Z245.1

Steel Fittings
CSA Z245.11

Steel Flanges
CSA Z245.12

Steel Valves - Oil & Gas Industry Systems & Materials
Covers steel valves primarily intended for use in oil or gas pipeline systems. The following types of valves are covered: gate valves, plug valves, ball valves, and check valves.
CSA Z245.15

Oil and Gas Pipeline Systems
Covers the design, construction, operation, and maintenance of oil and gas industry pipeline systems that convey liquid hydrocarbons, including crude oil, multiphase fluids, condensate, liquid petroleum products, natural gas liquids, and liquefied petroleum gas; oilfield water; oilfield steam; carbon dioxide used in oilfield enhanced recovery schemes; and or gas.
CSA Z662

American Petroleum Institute (API)

Tank Inspection, Repair, Alteration & Reconstruction
Covers the inspection, repair, alteration and reconstruction of steel aboveground storage tanks used in the petroleum and chemical industries. Provides the minimum requirements for maintaining the integrity of welded or riveted, nonrefrigerated, atmospheric pressure, aboveground storage tanks after they have been placed in service.
API STD 653

Specification for Line Pipe
Provides standards for pipe suitable for use in conveying gas, water and oil in both the oil and natural gas industries. Covers seamless and welded steel line pipe, including standard-weight and extra-strong threaded line pipe; and standard-weight plain-end, regular-weight plain-end, special plain-end, extra-strong plain-end, and double-extra-strong plain-end pipe; as well as bell and spigot and through-flowing (TFL) pipe.
API SPEC 5L

Government and Military Documents

Energy
10 CFR 1-50
10 CFR 51-199
10 CFR 200-499
10 CFR 500-END

Transportation of Natural and Other Gas by Pipeline; Annual Reports, Incident Reports and Safety-Related Condition Reports
Contained in 49 CFR 186 - 199.
49 CFR PT 191

Transportation of Natural and Other Gas by Pipeline; Minimum Federal Safety Standards
Contained in 49 CFR 186 -199.
49 CFR PT 192

Transportation of Hazardous Liquids by Pipeline
Contained in 49 CFR 186 - 199.
49 CFR PT 195

Petroleum Fuel Facilities
MIL-HDBK-1022

Cargo Tank Cleaning
MIL-HDBK-291

Pipe and Pipe Fittings, Glass Fiber Reinforced Plastic, for Liquid Petroleum Lines
MIL-P-29206

Color Code/Pipelines and for Compressed Gas Cylinders
MIL-STD-101

Natural Gas and Liquid Petroleum Piping
NFGS 15195

Cleaning Petroleum Storage Tanks
NFGS-Y-13657

Hydraulic Institute (HI)

Complete Set of Centrifugal, Reciprocating, Rotary, and Vertical Pump Standards
The greatly expanded Hydraulic Institute ANSI/HI Pump Standards Year 2000 Edition replaces all previous editions. It contains the latest information on the full range of pump types, including definitions, industry terminology, design and application, installation, operation, and maintenance guidelines. It also includes HI's widely accepted test standards in both Inch and Metric units. The 24-document set has been expanded to include more relevant data. In Centrifugal Pump Design and Application, there are seven new sections. A new Mechanical Test section for Centrifugal Pumps and Vertical Pumps has information on set-up and operation of a mechanical integrity test. For Vertical Pump Design and Application, four new sections are included. For Rotary Pumps there is a significant new section on nozzle loads. New general guidelines for pump, a tutorial section with revised text on vibrational dynamics for 11 different pump types and a guideline on condition monitoring for Centrifugal and Vertical pumps are included. A comprehensive index is supplied separately.
HI M100

Instrumentation, Systems and Automation Society (ISA)

Temperature Measurement Thermocouples
Covers coding of thermocouple and extension wire; coding of insulated duplex thermo-couple extension wires; terminology, limits of error and wire sizes for thermocouples and thermocouple extension wires; temperature EMF tables for thermocouples; plus appendices that cover fabrication, checking procedures, selection, and installation.
ISA MC96.1

Wiring Practices for Hazardous (Classified) Locations Instrumentation - Part 1: Intrinsic Safety
Provides guidance for the design, installation, and maintenance of intrinsically safe systems for hazardous (classified) locations. Information is provided to clarify and explain the requirements of Article 504 of the National Electrical Code.
ISA RP12.6

American Petroleum Institute (API)

Welding of Pipelines and Related Facilities
Covers gas and arc welding for the production of high-quality welds in carbon and low-alloy steel piping used in the compression, pumping, and transmission of crude petroleum, petroleum products, and fuel gases where applicable to distribution systems.
API STD 1104

Welded Steel Tanks for Oil Storage
Covers material, design, fabrication, erection, and testing requirements for vertical, cylindrical, aboveground, closed -and open-top, welded steel storage tanks in various sizes and capacities for internal pressures approximating atmospheric pressure (internal pressures not exceeding the weight of the roof plates), but a higher internal pressure is permitted when additional requirements are met. This standard applies only to tanks whose entire bottom is uniformly supported and to tanks in non-refrigerated service that have a maximum operating temperature of 200°F.
API STD 650

International Organization for Standardization (ISO)

Petroleum and Natural Gas Industries - Steel Pipe for Pipelines - Technical Delivery Conditions - Part 1: Pipes of Requirement Class A
ISO 3183-1

Petroleum and Natural Gas Industries - Steel Pipe for Pipelines - Technical Delivery Conditions - Part 2: Pipes of Requirements Class B
ISO 3183-2

Petroleum and Natural Gas Industries - Drilling and Production Equipment - Drill Stem Design and Operating Limits
ISO 10407

Petroleum and Natural Gas Industries - Subsurface Safety Valve Systems - Design, Installation, Operation and Repair
ISO 10417

Petroleum and Natural Gas Industries - Offshore Production Platforms - Analysis, Design, Installation and Testing of Basic Surface Safety Systems
ISO DIS 10418

Petroleum and Natural Gas Industries - Drilling and Production Equipment - Installation, Maintenance and Repair of Surface Safety Valves and Underwater Safety Valves Offshore
ISO 10419

Petroleum and Natural Gas Industries - Flexible Pipe Systems for Subsea and Marine Riser Applications
ISO 10420

Petroleum and Natural Gas Industries - Drilling and Production Equipment - Specification for Valves, Wellhead and Christmas Tree Equipment
ISO 10423

Petroleum and Natural Gas Industries - Drilling and Production Equipment - Specification for Wellhead Surface Safety Valves and Underwater Safety Valves for Offshore Service
ISO 10433

Petroleum and Natural Gas Industries - General Purpose Steam Turbines for Refinery Service
ISO 10436

Petroleum and Natural Gas Industries - Special Purpose Steam Turbines for Refinery Service
ISO DIS 10437

Petroleum and Natural Gas Industries - Pipeline Transportation Systems
ISO 13623

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS)

Quality Standard for Steel Castings for Valves, for Valve Flanges, and Fittings and Other Piping Components
MSS SP 55

NACE International (NACE)

Sulfide Stress Cracking Resistant Metallic Materials for Oil Field Equipment
Internationally recognized, and ANSI approved.
NACE MR 01 75

Control of External Corrosion on Underground or Submerged Metallic Piping Systems
NACE RP 01 69

Corrosion Control of Steel, Fixed-Offshore Platforms Associated with Petroleum Production
NACE RP 01 76

Fabrication Details, Surface Finish Requirements, and Proper Design Consideration for Tanks and Vessels to be Lined for Immersion Service
NACE RP 01 78

External Cathodic Protection of On-Grade Metallic Storage Tank Bottoms
NACE RP 01 93

National Electrical Manufacturers Association (NEMA)

Industrial Control and Systems General Requirements
Provides practical general information concerning ratings, construction, testing, performance, and manufacture of industrial control and systems equipment and terminal blocks. This publication is strongly recommended for use in conjunction with other NEMA ICS publications.
NEMA ICS 1

Industrial Control and Systems Controllers, Contactors and Overload Relays Rated 600 Volts
Provides general requirements for manual and magnetic controllers, and covers the requirements for magnetic and nonmagnetic motor controllers, overload relays, and magnetic lighting contactors.
NEMA ICS 2

Motors and Generators
Please see page 64 for a complete description.
NEMA MG 1

Energy Management Guide for Selection and Use of Fixed Frequency Medium AC Squirrel-Cage Polyphase Induction Motors
Provides practical information concerning the proper selection and application of polyphase induction and synchronous motors including installation, operation, and maintenance.
NEMA MG 10

National Fire Protection Association (NFPA)

National Electrical Code (NEC)
Please see page 39 for a complete description.
NFPA 70

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PETROCHEM/UTILITIES INDUSTRY TRENDS

The Institute of Electrical & Electronics Engineers, Inc. (IEEE)

IEEE Standard for Petroleum and Chemical Industry - Severe Duty Totally Enclosed Fan-Cooled (TEFC) Squirrel Cage Induction Motors-Up to and Including 500 HP
IEEE 841

General Requirements for Liquid-Immersed Distribution, Power and Regulating Transformers
Electrical, mechanical, and safety requirements are set forth for liquid-immersed distribution and power transformers, and autotransformers and regulating transformers; single and polyphase, with voltages of 601 V or higher in the highest voltage winding. This standard is the basis for the establishment of performance, limited electrical and mechanical interchangeability, and safety requirements of equipment described; and for assistance in the proper selection of such equipment.
IEEE C57.12.00

Test Code for Liquid-Immersed Distribution, Power and Regulating Transformers
Defines a common format for data files and exchange medium used for the interchange of various types of fault, test, or simulation data for electrical power systems.
IEEE C57.12.90

Tubular Exchanger Manufacturers Association (TEMA)

Standards of the Tubular Exchanger Manufacturers Association - 8th Edition
Includes CD-ROM.
TEMA BOOK OF STANDARDS

Underwriters Laboratories, Inc. (UL)

Steel Underground Tanks for Flammable and Combustible Liquids
Covers horizontal atmospheric-type steel tanks intended for the storage underground of flammable and combustible liquids. Covers single wall tanks, secondary containment tanks, multiple compartment single wall and multiple compartment secondary containment tanks.
UL 58

Valves for Anhydrous Ammonia and LP-Gas (Other than Safety Relief)
Covers the following types of anhydrous ammonia and liquefied petroleum gas (LP-Gas) valves for use at temperatures within the range of minus 40°F (minus 40°C) to 130°F (55°C): shut-off valves, excess flow valves, back pressure check valves, filler valves, vapor return valves, and actuated liquid withdrawal excess-flow valves.
UL 125

Safety Relief Valves for Anhydrous Ammonia and LP-Gas
Covers safety valves and hydrostatic relief valves for anhydrous ammonia and liquefied petroleum gas (LP-Gas) for use in nonrefrigerated systems in facilities covered in ANSI K61.1, NFPA 58-1995, and NFPA 59-1995.
UL 132

Steel Aboveground Tanks for Flammable and Combustible Liquids
Covers steel atmospheric tanks intended for aboveground storage of noncorrosive, stable flammable, and combustible liquids that have a specific gravity not exceeding that of water.
UL 142

Nonmetallic Underground Piping for Flammable Liquids

Covers primary carrier and secondary containment nonmetallic pipe and fittings (piping) intended for use underground in the distribution of petroleum-based flammable and combustible liquids, alcohols, and alcohol-blended fuels. Unless otherwise stated, requirements apply to both primary carrier and secondary containment pipe and fittings.

UL 971

Glass Fiber Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-Gasoline Mixtures

Covers spherical or horizontal cylindrical, atmospheric-type tanks of glass-fiber-reinforce d plastic (FRP) that are intended for the underground storage of petroleum-based flammable and combustible liquids, alcohols, and alcohol-blended fuels.

UL 1316

External Corrosion Protection Systems for Steel Underground Storage Tanks

Covers pre-engineered corrosion protection systems.

UL 1746

Society of the Plastics Industry (SPI)

For Plastics Machinery - Horizontal Injection Molding Machines - Safety Requirements for Manufacture, Care and Use
ANSI B151.1

ASM International (ASM)

Engineering Plastics
ASM ENGINEERED HDBK V2

Engineering Plastics and Composites, 2nd Edition
ASM ENGINEERING PLASTICS

ASTM International (ASTM)

Plastics
ASTM SECTION 8

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ASTM International (ASTM)

Section 8 - Plastics
ASTM SECTION 8

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Plastics (I): D 256 - D 2343
ASTM 08.01

Plastics (II): D 2383 - D 4322
ASTM 08.02

Plastics (III): D 4329 - Latest
ASTM 08.03

Taken together, these 3 volumes (08.01 - 08.03) have tests and practices for assessing physical properties, evaluating mechanical properties, optical properties, permanence properties, and thermal properties. In addition to the several specifications and tests that cover film and sheeting, these volumes also cover cellular plastics, olefin plastics, reinforced plastics, and thermosetting materials. These volumes also include several tests and practices that pertain to environmentally degradable plastics and others that outline standards procedures for molding.

Plastic Pipe and Building Products
ASTM 08.04

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ASTM Plastics/Plastics Piping Systems Collection CD
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ASTM PLASTICS CD

Plastics Piping Standards
A compilation of 55 ASTM Plastics Piping Standards categorized by the following subjects: Terminology, Test Methods, Pipe Specifications, Installation/Joining, Sample Preparation, Resins, and Fitting Specifications. One volume, includes binder.
PLASTICS PIPING STANDARDS

British Standards Institution (BSI)

Plastics - Determination of Cadmium - Wet Decomposition Meth
BS EN 1122

British Standards Institution (BSI)

Specification for Design and Construction of Vessels and Tanks in Reinforced Plastics
BS 4994

Rubber and Plastics Machines - Injection Moulding Machines - Safety Requirements
BS EN 201

Rubber and Plastics Machinery - Compression and Transfer Moulding Presses - Safety Requirements for the Design
BS EN 289

Plastics - Determination of Cadmium - Wet Decomposition Meth
BS EN 1122

Rubber and Plastics Machines - Reaction Moulding Machines - Part 1. Safety Requirements for Metering and Mixing Units
BS EN 1612-1

Deutsches Institut fur Normung, e.V. (DIN)

Plastics 1. Standards for Methods of Testing Mechanical, Thermal and Electrical Properties
DIN HDBK 18

Plastics 10. Standards for Roofing Felt and Waterproofing Sheeting, Floor Coverings and Artificial Leather.
DIN HDBK 150

Standards for Thermosetting Plastics Pipes, Pipe Fittings and Pipejoint Assemblies
DIN HDBK 171

GM North America (GM)

Plastics
GM PLASTICS

International Organization for Standardization (ISO)

Plastics - Determination of Flexural Properties
ISO 178

International Organization for Standardization (ISO)

Plastics - Determination of Flexural Properties
ISO 178

Plastics - Injection Moulding of Test Specimens of Thermoplastic Materials - Part 1: General Principles, and Moulding of Multipurpose and Bar Test Specimens
ISO 294-1

Plastics - Determination of Tensile Properties - Part 1: General Principles
ISO 527-1

Plastics - Determination of Tensile Properties - Part 2: Test Conditions for Moulding and Extrusion Plastics
ISO 527-2

Plastics - Symbols and Abbreviated Terms - Part 1: Basic Polymers and Their Special Characteristics
ISO 1043-1

Plastics - Symbols and Abbreviated Terms - Part 2: Filler and Reinforcing Materials
ISO 1043-2

Plastics - Symbols and Abbreviated Terms - Part 3: Plasticizers
ISO 1043-3

Plastics - Symbols and Abbreviated Terms - Part 4: Flame Retardants
ISO 1043-4

Plastics - Generic Identification and Marking of Plastics Products
ISO 11469

Japanese Standards Association (JSA)

Japanese Industrial Standards (JIS) Handbooks

JIS Plastics 1 (Test Methods)
JIS PLASTICS 1

JIS Plastics 2 (Materials and Products)
JIS PLASTICS 2

McGraw Hill Publishing Company

Written by Charles A. Harper

Handbook of Plastics, Elastomers, and Composites
A broad range of new industrial techniques and developments are presented. Categorizes plastics and elastomers, identifies the materials in each category, and presents the advantages of each for major products. Includes a broad range of new thermoplastics; new developmental advances; new developments in processing composites; high performance requirements for products with both chemical and mechanical applications; new improvements in plastic compositions and process capabilities; and health and safety aspects.
HANDBOOK OF PLASTICS

Written by George S. Brady and Henry R. Clauser

Materials Handbook
Encyclopedic coverage of the nature and use of 15,000 alphabetically-arranged materials and substances, discussed in 800 articles. For each material and substance, there is information on composition, production methods, properties and characteristics, uses, and commercial designations or trade names. This edition includes 1,000 new materials and revisions of approximately 50% of the 15,000 entries. Weights and measures are given in both S.I. and U.S. Customary Units.
MATERIALS HANDBOOK

NACE International (NACE)

Managing Corrosion with Plastics, Volume X
NACE 37368

Managing Corrosion with Plastics, Volume XI
NACE 37382

Corrosion of Plastics and Rubber in Process Equipment-Experiences from the Pulp and Paper Industry
NACE 37769

Furan Reinforced Thermoset Plastics for Chemical Process Equipment MTI Publication No. 21
NACE 37912

NSF International (NSF)

Plastics Piping System Components and Related Materials
NSF 14

Plastics Engineering Handbook of The Society of the Plastics Industry

Plastics Engineering Handbook of The Society of the Plastics Industry
Sponsored by SPI, for more than 40 years this classic work has served as the keystone reference for all involved in plastics selection and processing applications. This edition features a full revision and update of each chapter, with key sections contributed by leaders in each speciality. Covers such newer areas as high-temperature thermoplastics; RTM and SRIM; sophisticated online process control, gas-assisted injection molding; stretch blow molding; thermoplastic composites; liquid crystal polymers; and new plastics applications.
PLASTICS ENGINEERING HDBK

SAE International (SAE)

Cap, Dust, Plastic, Electric Connector
SAE AS 90376

Marking of Plastic Parts
SAE J1344

Classification System for Automotive Polyamide (PA) Plastics
SAE J1639

Society of Plastics Engineers (SPE)

Society of Plastics Engineers Publications Catalog
SPE INDEX

Society of the Plastics Industry (SPI)

For Plastics Machinery - Horizontal Injection Molding Machines - Safety Requirements for Manufacture, Care and Use
ANSI B151.1

For Plastic Film and Sheet Winding Machinery - Manufacture, Care and Use
ANSI B151.5

For Plastics Machinery - Plastics Extrusion Machines - Requirements for the Manufacture, Care, and Use
ANSI B151.7

For Plastics Machinery - Extrusion Blow Molding Machines - Safety Requirements for Manufacture, Care, and Use
ANSI B151.15

For Plastic Sheet Production Machinery - Manufacture, Care and Use
ANSI B151.20

For Plastics Machinery - Injection Blow Molding Machines - Safety Requirements for Manufacture, Care, and Use
ANSI B151.21

For Plastics Machinery - Robots used with Horizontal Injection Molding Machines - Safety Requirements for the Integration, Care and Use
ANSI B151.27

Recommended Guideline for Safety Signs for Plastic Machinery and Related Equipment
SPI AN 137

Mold Finish Guide
SPI AR 106

Custom Contact-Molded Reinforced Polyster Chem-Resist
SPI PS 15

Underwriters Laboratories, Inc. (UL)

Plastics - UL Set 15
Includes: UL 94, UL 723, UL 746A, UL 746B, UL 746C, and UL 746D.
UL Set 15

Listed below are the UL Standards for Safety contained in UL Set 15.

UL Set 15 - Plastics

Tests for Flamability of Plastics Materials for Parts in Devices & Appliances
UL 94

Test for Surface Burning Characteristics of Building Materials
UL 723

Polymeric Materials - Short Term Property Evaluation
UL 746A

Polymeric Materials - Long Term Property Evaluations
UL 746B

Polymeric Materials - Use in Electrical Equipment Evaluations
UL Set 15 - Plastics.
UL 746C

Polymeric Materials - Fabricated Parts
UL 746D

UL Related Plastics Standards

Polymeric Materials - Coil Forms
UL 1692

Test for Flammability of Small Polymeric Component Materials
UL 1694

Fire Tests for Foamed Plastics Used for Decorative Purposes
UL 1975

Test Methods for Determining the Combustibility Characteristics of Plastics used in Semi-Conductive Tool Construction
UL 2360

American Conference of Governmental Industrial Hygienists (ACGIH)

Material Safety Data Sheets (MSDS), CD-ROM
ACGIH MSDS CD-ROM

American Conference of Governmental Industrial Hygienists (ACGIH)

2000 TLVs and BEIs: Threshold Limit Valves for Chemical Substances and Physical Agents
This user-friendly, pocket-size publication is used world-wide as a guide for evaluation and controlling workplace exposures to chemical substances and physical agents. Threshold Limit Value (TLV) occupational exposure guidelines are recommended for over 700 chemical substances and physical agents. Includes more than 50 Biological Exposure Indices (BELs) covering over 80 chemical substances.
ACGIH BIOLOGICAL EXPOSURE

Occupational Biomechanics
ACGIH BIOMECHANICS

Personal Protective Equipment Pocket Guide
ACGIH EQUIPMENT GUIDE

Fundamentals of Industrial Hygiene
ACGIH FUNDAMENTALS

Occupational Health & Safety
Major topic areas include: The Occupational Safety and Health Team; Managing the Health Safety Process; Managing Human Resources; Legal/Ethical Considerations; and Outlook for Occupational Health and Safety.
ACGIH HEALTH

Industrial Ventilation - A Manual of Recommended Practice
ACGIH MANUAL

Material Safety Data Sheets (MSDS), CD-ROM
ACGIH MSDS CD-ROM

American Petroleum Institute (API)

API Health, Environment and Sciences Department (HESD) Publications
API conducts health and environmental research programs on a variety of topics of interest to the petroleum industry. These programs result in software or reports providing information to assist companies in addressing issues such as: a) Health effects of petroleum products; b) Effects of fuel changes on vehicle emissions; c) Remediation of contaminated sites; d) Storage tank and pipeline leak detection; and e) Techniques to estimate facility air emissions. In addition, these programs foster the exchange of scientific and technical information among industry engineers and scientists as well as other professionals, governmental and industrial organizations. Both current and historical HESD publications from API are available from Global.
Call for quote

American Welding Society (AWS)

Effects of Welding on Health
Set of 11 Books with Hardcopy Index. Deals with studies of the fumes, gases, radiation and noise generated during various arc welding processes. Section 1 summarizes studies of the occupational exposures, while Section 2 contains information related to the human health effects of exposure to by-products of welding operations. Section 3 discusses studies of the effects of welding emissions on laboratory animals and in vitro cell systems.
AWS EWH- ALL
AWS EWH-ACD

Safety and Health Fact Sheets
AWS SHF

British Standards Institution (BSI)

Samples for Testing
BS 6920 P2 S2.1

Suitability of Non-Metallic Products for use in Contact with Water Intended for Human Consumption with Regard to Their Effect on the Quality of the Water - Part 2: Methods of Test - Section 2.2: Taste of Water - Subsction 2.3: Appearance of Water
BS 6920 P2 S2.3

Suitability of Non-Metallic Products for use in Contact with Water Intended for Human Consumption with Regard to Their Effect on the Quality of the Water - Part 2: Methods of Test - Section 2.4: Growth of Aquatic Micro-Organisms Test
BS 6920 P2 S2.4

Suitability of Non-Metallic Products for use in Contact with Water Intended for Human Consumption with Regard to Their Effect on the Quality of the Water - Part 2: Methods of Test - Section 2.5: The Extraction of Substances that may be of Concern to Public Health
BS 6920-2.5

Suitability of Non-Metallic Products for use in Contact with Water Intended for Human Consumption with Regard to Their Effect on the Quality of the Water - Part 2: Methods of Test - Section 2.6: The Extraction of Metals
BS 6920-2.6

Code of Federal Regulations (CFR)

From the Office of the Federal Register. Global stocks the complete multi-volume collection of the CFR and Index. The Code of Federal Regulations is a codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government of the United States. It is divided into 50 titles which represent broad areas subject to Federal regulation. Subjects include: Energy, Commerce and Foreign Trade, Customs Duties, Food and Drug, Foreign Relations, Labor, Protection of Environments, Telecommunication, and Transportation.

Code of Federal Regulation (CFR) Complete Set
Please see page 154 for a complete description.
CFR SET

Public Health
Please see page 156 for a complete description.
42 CFR 1-399
42 CFR 400-429
42 CFR 430-END

NSF International (NSF)

Drinking Water Treatment Chemicals - Health Effects
This standard covers products intended to be added to water in the production of drinking water for such purposes as: disinfection, oxidation, filtration, scale control, corrosion control, pH adjustment, softening, and precipitation.
NSF 60

NSF International (NSF)

Food Service Equipment
This document has a supplement sold separately (NSF 2-Supplement). Covers equipment commonly known as “fabricated food equipment.” It includes basic principles of design, construction, and performance necessary for food protection.
NSF 2

Descriptive Details for Food Service Standard Equipment Standards
This is the supplement to NSF 2: Food Service Equipment
NSF 2 SUPPLEMENT

Refuse Processors and Processing Equipment
NSF 13

Commercial Bulk Milk Dispensing Equipment
NSF 20

Residential Wastewater Treatment Systems
This standard contains minimum requirements for residential wastewater treatment systems having single, defined discharge points and rated treatment capacities between 1,514 L/day (400 gal/day) and 5,678 L/day (1500 gal/day).
NSF 40

Non-Liquid Saturated Treatment Systems
This standard establishes minimum materials, design and construction and performance requirements for non-liquid saturated treatment systems. It is intended to protect public health and the environment as well as minimize nuisance factors.
NSF 41

Drinking Water Treatment Units - Aesthetic Effects
The point-of-use and point-of-entry systems addressed by this standard are designed to be used for the reduction of specific substances that may be present in drinking water considered to be microbiologically safe and of known quality.
NSF 42

Residential Cation Exchange Water Softeners
NSF 44

Drinking Water Treatment Units - Health Effects
The point-of-use and systems addressed by this standard are designed to be used for the reduction of specific substances that may be present in drinking water. These substances are considered established or potential health hazards.
NSF 53

Reverse Osmosis Drinking Water Treatment Systems
The point-of-use reverse osmosis drinking water treatment systems addressed by this standard are designed to be used for the reduction of specific substances that may be present in drinking water supplies (public or private).
NSF 58

Drinking Water Treatment Chemicals - Health Effects
This standard covers products intended to be added to water in the production of drinking water for such purposes as: disinfection, oxidation, filtration, scale control, corrosion control, pH adjustment, softening, and precipitation.
NSF 60

Drinking Water System Components - Health Effects
This standard is intended to cover specific materials for products that come into contact with drinking water, drinking water treatment chemicals, or both.
NSF 61

American Petroleum Institute (API)

Specification for Quality Programs for the Petroleum and Natural Gas Industry

API's Monogram mark quickly identifies manufacturers as licensed suppliers to the petroleum industry, and offers users the industry's best guide to quality. Outlines quality assurance requirements identified as necessary to facilitate the board availability of safe and interchangeable products. This program licenses manufacturers to use the API Monogram on equipment manufactured in accordance with API's Exploration and Production standard specifications. Each quarter, a Composite List of Companies Licensed to Use the API Monogram and APIQR ISO 9000 Registration Mark is widely circulated, providing detailed product lists from which purchasers may select quality equipment from reliable sources.

API SPEC Q1

NPRA Survey, Final Report: 1996 API/NPRA Survey of Refining Operations and Product Quality

A survey of industry refining data for the period May 1 through August 31, 1996. The report includes information on domestically produced gasoline and diesel product quality as well as aggregate domestic refining capacity and average operating data.

API NPRA SURVEY

Quality Improvement Manual For Mechanical Equipment In Petroleum, Chemical, and Gas Industries

This standard provides guidelines for improving the quality of mechanical equipment. It is intended to mutually benefit users, contractors, and suppliers; and facilitate improved relationships between them by promoting trust, teamwork, and communication. A three-part approach for improving the quality of mechanical equipment is described in this recommended practice, consisting of (a) the traditional methods used to help assure quality; (b) techniques that can be used to identify those suppliers who have quality systems so effective that intense user involvement is unnecessary; and (c) suggestions on how users, contractors, and suppliers can work together to improve quality.

API RP 683

Refractory Installation Quality Control Guidelines - Inspection and Testing Monolithic Refractory Linings and Materials

This standard provides guidelines for the installation quality control of monolithic refractory linings and may be used to supplement owner specifications. Materials, equipment and personnel are qualified by the methods described; and applied refractory quality is closely monitored based on defined procedures and acceptance quality.

API RP 936

American Society for Quality (ASQ)

Guidelines for Auditing Quality Systems

Includes Q10011-1, Q10011-2, and Q10011-3 (American equivalent to ISO 10011).

ASQ Q10011 Series

ASQ Q9000 SET

Includes ASQ Q9000, ASQ Q9001, and ASQ Q9004.

ASQ Q9000 SET

American Society for Quality (ASQ)

Managing the quality process is a major issue for many manfacturers today. Implementing Total Quality Management (TQM) can be complex, time-consuming, and often a baffling process. How do you start and maintain an effective quality management program? How can you be sure that your program is comprehensive enough to meet the demanding requirements of consumers around the world? Now the American Society for Quality (ASQ) and Global bring you the industry's foremost experts to give you the tools you need to build and succeeed in your program.

ASQ Q9000 Series - Quality Standards

Quality Management and Quality Assurance Standards - Guidelines for Selection and Use

These ASQ standards are internationally recognized as identical to the ISO 9000 quality standards. This standard explains the fundamental quality concepts of the standards and provides guidelines for the selection and use of Q9001, Q9002, Q9003, and Q9004.

ASQ Q9000-1

Quality Management and Quality Assurance Standards- Guidelines for the Application of ANSI/ISO/ASQC 9001:1994 to the Development, Supply, Installation, and Maintenance of Computer Software

ASQ Q9000-3

Quality Management Systems - Fundamentals and Vocabulary

This standard explains the fundamental quality concepts and the vocabulary used in the ANSI/ISO/ASQ Q9001-2000 and Q9004-2000 quality standards.

ASQ Q9001

Quality Management Systems - Guidelines for Performance Improvements

This standard describes the basic set of elements by which a quality management system can be developed and implemented internally. It provides guidance and interpretation for implementing an ISO 9000:2000 quality system within your organization.

ASQ Q9004

ASQ Q9000 SET

Includes ASQ Q9000, ASQ Q9001, and ASQ Q9004.

ASQ Q9000 SET

Other Popular ASQ Standards on Quality

Guidelines for Auditing Quality Systems

Includes Q10011-1, Q10011-2, and Q10011-3 (American equivalent to ISO 10011).

ASQ Q10011 Series

Guide for Quality Control Charts - Control Chart Method of Analyzing Data - Control Chart Method of Controlling Quality During Production

ANSI/ASQC B1-1996: This is a guide for handling problems concerning the economic control of quality of materials and manufactured products, with particular reference to methods of collecting, arranging, and analyzing inspection. ANSI/ASQC B2-1996: This guide gives particular reference to quality data resulting from inspections and tests of materials and manufactured products. ANSI/ASQC B3-1996: This outlines the control chart method of identifying and eliminating causes of trouble in repetitive production processes in order to reduce variation in the quality of manufactured products and materials.

ASQ B1-B3

Quality Management and Quality Assurance - Vocabulary

This standard defines the fundamental terms relating to quality concepts, as they apply to all areas, for the preparation and use of quality management and assurance standards. (Revision and redesignation of ANSI/ASQC A3-1987.)

ASQ A8402

Sampling Procedures and Tables for Inspection by Attributes

This updated standard replaces MIL-STD-105E and establishes sampling plans and procedures for inspection by attributes. It is also compatible and interchangeable with ANSI/ASQC Z1.9-1993 for variables inspection.

ASQ Z1.4

Sampling Procedures and Tables for Inspection by Variables for Percent Non-Confirming

This standard establishes sampling plans and procedures for inspection by variables, corresponds to the military standard MIL-STD-414, and is interchangeable with ISO 3951. It contains tables and procedures of MIL-STD-414.

ASQ Z1.9

General Requirements For A Quality Program

This standard establishes a quality program by a contractor to ensure compliance with contract requirements in the areas of quality management, design information, procurement, manufacture, acceptance, and documentation.

ASQ C1

Statistics - Vocabulary and Symbols - Probability and General Statistical Terms

Revision and Redesignation of ANSI/ASQC A1-1987 and ANSI/ASQC A2-1987.

ASQ A3534-1

Statistics - Vocabulary and Symbols - Statistical Quality Control

Revision and redesignation of ANSI/ASQC A1-1987 and ANSI/ASQC A2-1987.

ASQ A3534-2

Guide to Inspection Planning

This standard provides generic guidelines for planning and applying a product/process inspection system for construction, manufacturing, operating, or service functions.

ASQ E2

Quality Management - Guidelines to Quality in Project Management

This standard offers direction on those quality systems elements, concepts, and practices for which the implementation is important to and has an impact on the practice of project management.

ASQ Q10006

Quality Management - Guidelines for Configuration Management

This standard provides guidelines for configuration management, which provides visibility and control of a product's functional and physical characteristics. It satisfies requirements found in other ISO 9000 family standards.

ASQ Q10007

Sampling Procedures and Tables for Inspection of Isolated Lots by Attributes

This acceptance sampling system is used when one or more lots that are isolated or separated from a continuous stream of lots are submitted for acceptance. The quality levels referenced in this standard are indexed by limiting quality. The procedures of this standard differ from those of ANSI/ASQC Z1.4.

ASQ Q3

An Attribute Skip-Lot Sampling Program

To be used only with ANSI/ASQC Z1.4-1993, this standard provides a procedure for reducing the inspection effort on products submitted by those suppliers who have demonstrated their ability to control all facets of product quality.

ASQ S1

Introduction To Attribute Sampling

Written to assist in the proper application of ANSI/ASQC Z1.4-1993, much of what is included in this guide applies equally well to many other standards for the acceptance of lots by sampling procedures.

ASQ S2

Written by Richard S. Johnson

TQM: Management Processes for Quality Operations

Major topics include hiring; performance management and improvements; quality culture, how to write a quality manual and managing change; time management; and management ethics.

ASQ H0732

Written by Richard S. Johnson

TQM: Quality Training Practices

An outline to develop and implement an ongoing in-house training program that produces results using on-board resources.

ASQ H0734

Written by B. Scott Parsowith

Fundamentals of Quality Auditing

A clear and concise overview of the quality auditing field, with examples from the best work of current auditing experts. A brief summary of sampling and general statistics is included to provide you with the basic concepts necessary for an accurate audit.

ASQ H0794

Written by Dianne Galloway

Mapping Work Processes

This hands-on, step-by-step workbook outlines the creation of flow charts, proven to help improve any work process. Detailed exercises teach anyone to chart and document processes, understand them, and make improvements from them.

ASQ H0822

Written by Dennis Arter

Quality Audits for Improved Performance, Second Edition
This book provides a single source of information on the basics of quality auditing. This edition clarifies the third party role, has an expanded appendix and includes new ideas and techniques based on ISO 9000.
ASQ H0844

Written by Lawrence A. Wilson

Eight-Step Process to Successful ISO 9000 Implementation: A Quality Management System Approach
Renowned ISO 9000 expert presents his proven eight-step process for ISO 9000 implementation in full detail. His methodologies will systematically and cost-effectively guide you through all aspects of ISO 9000 implementation, including the registration process.
ASQ H0878

Principles and Practices of Organizational Performance Excellence
This is an easy overview of TQM illustrated with a detailed explanation of quality tools. The book shows how management's adoption of TQM is necessary to keep a competitive edge.
ASQ H0995

Written by Bob E. Hayes

Measuring Customer Satisfaction: Survey Design, Use, and Statistical Analysis Methods
Includes significant discussions of reliability statistics for measuring questionnaire precision, as well as the statistical framework for using customer satisfaction questionnaires.
ASQ H0925

International Electrotechnical Commission (IEC)

Electronic Components Specification Structures for Quality Assessment (Qualifications Approval and Capability Approval)
IEC GUIDE 102

Basic Rules of the IEC Quality Assessment System for Electronic Components (IECQ)
IEC QC 001001

IEC Quality Assessment System for Electronic Components (IECQ) Rules of Procedure - Part 1: Administration
IEC QC 001002-1

IEC Quality Assessment System for Electronic Components (IECQ) Rules of Procedure - Part 2: Documentation
IEC QC 001002-2

Rules of Procedure of the IEC Quality Asssessment Systems for Electronic Component (IECQ) - Part 3: Approval Procedures, Including a New Clause on Technology Approval
IEC QC 001002-3

IEC Quality Assessment System for Electronic Components (IECQ) - Specifications List
IEC QC 001004

Quality Management and Quality Assurance Standards - Part 4: Guide to Dependability Programme Management
Gives the essential features of a comprehensive dependability program for the planning, organization, direction and control of resources to produce products which will be reliable and maintainable. This publication supersedes IEC 60300.
IEC 60300-1

International Electrotechnical Vocabulary - Part 191: Dependability and Quality of Service
IEC 60050-191

International Organization for Standardization (ISO)

ISO 9000 Collection 1
Includes the 2000 Revisions of ISO 9000,ISO 9001, and ISO 9004.
ISO 9000 COLLECTION 1

International Standards for Quality Management
Quality is a strategic need - it is critical to you and your customers. Global has the resources to help your quality be as good as it should be by offering fast and complete access to ISO standards and publications. The ISO 9000 Compendium, now in its 9th Edition, offers you the most current information on quality management. It explains how to develop and run a quality assurance system, and provides details on the various types of quality operations - so you can create a strategy that works best for you. In the Compendium you'll receive the published international standards that have been approved by worldwide consensus. Plus, all draft standards are also included, providing you with the latest information currently circulated for industry comments.
ISO 9000 COMPENDIUM

You may order the documents individually or as a complete set in the Compendium.

Quality Assurance Requirements for Measuring Equipment Set
Set includes ISO 10012-1 and ISO 10012-2.
ISO 10012 SET

International Organization for Standardization (ISO)

ISO 9000 Collection 1
Includes the 2000 Revisions of ISO 9000, ISO 9001, and ISO 9004.
ISO 9000 COLLECTION 1

ISO 9000 Collection 2
Includes ISO 9000 Series Documents.
ISO 9000 COLLECTION 2

ISO 9000

International Standards for Quality Management

Quality is a strategic need - it is critical to you and your customers. Global has the resources to help your quality be as good as it should be by offering fast and complete access to ISO standards and publications. The ISO 9000 Compendium, now in its 9th Edition, offers you the most current information on quality management. It explains how to develop and run a quality assurance system, and provides details on the various types of quality operations - so you can create a strategy that works best for you. In the Compendium you'll receive the published international standards that have been approved by worldwide consensus. Plus, all draft standards are also included, providing you with the latest information currently circulated for industry comments.
ISO 9000 COMPENDIUM

You may order the documents individually or as a complete set in the Compendium.

Quality Management Systems - Fundamentals and Vocabulary

Establishes a starting point for understanding the standards and defines the fundamental terms and definitions used in the ISO 9000 family which you need to avoid misunderstandings in their use.
ISO 9000

Quality Management Systems Requirements

This is the requirement standard you use to assess your ability to meet customer and applicable regulatory requirements and thereby address customer satisfaction. It is now the only standard in the ISO 9000 family against which third-party certification can be carried.
ISO 9001

Quality Management and Quality System Elements - Guidelines for Performance Improvements

This guideline standard provides guidance for continual improvement of your quality management system to benefit all parties through sustained customer satisfaction.
ISO 9004

Guidelines for Quality and/or Environmental Management Systems Auditing

Provides you with guidelines for verifying the system's ability to achieve defined quality objectives. You can use this standard internally or for auditing your suppliers. This standard now replaces ISO 14010, ISO 14011, and ISO 14012.
ISO 19011

Quality Management - Guidelines for Quality Plans

Provides guidelines to assist in the preparation, review, acceptance, and revision of quality plans.
ISO 10005

Quality Management - Guidelines to Quality in Project Management

Guidelines to help you ensure the quality of both the project processes and the project products.
ISO 10006

Quality Management - Guidelines for Configuration Management

Gives you guidelines to ensure that a complex product continues to function when components are changed individually.
ISO 10007

Guidelines for Auditing Quality Systems Set

Set includes ISO 10011-1, ISO 10011-2, and ISO 10011-3.
ISO 10011 SET

Guidelines for Auditing Quality Systems - Part 1: Auditing

ISO 10011-1

Guidelines for Auditing Quality Systems - Part 2: Qualification Criteria for Quality Systems Auditors

ISO 10011-2

Guidelines for Auditing Quality Systems - Part 3: Management of Audit Programmes

ISO 10011-3

Quality Assurance Requirements for Measuring Equipment Set

Set includes ISO 10012-1 and ISO 10012-2.
ISO 10012 SET

Quality Assurance Requirements for Measuring Equipment - Part 1: Metrological Confirmation System for Measuring Equipment

Applies to: Testing laboratories, including those providing a calibration service; suppliers of products or services; and other organizations where measurement is used to demonstrate compliance with specified requirements.
ISO 10012-1

Quality Assurance Requirements for Measuring Equipment - Part 2: Control of Measurement Process

Provides supplementary guidance on the application of statistical process control when this is appropriate for achieving the objectives of Part 1.
ISO 10012-2

Measurement Control Systems - Quality Assurance Requirements for Measuring Equipment - Part 1: Metrological Confirmation System for Measuring Equipment

Give you guidelines on the main features of a calibration system to ensure that measurements are made with the intended accuracy. (Currently in the Draft International Standard stage.)
ISO DIS 10012

Guidelines for Developing Quality Manuals

Provides guidelines for the development, and maintenance of quality manuals, tailored to your specific needs (W/D S/S By ISO TR 10013).
ISO 10013

Guidelines for Quality Management System Documentation

Provides guidelines for the development, and maintenance of quality manuals, tailored to your specific needs.
ISO TR 10013

Guidelines for Managing the Economics of Quality

Provides guidance on how to achieve economic benefits from the application of quality management.
ISO TR 10014

Quality Management - Guidelines for Training

Provides guidance on the development, implementation, maintenance, and improvement of strategies and systems for training that affects the quality of products.
ISO 10015

Guildance on Statistical Techniques for ISO 9001:1994

ISO TR 10017

Quality Management Systems - Particular Requirements for the Application of ISO 9001:2000 for Automotive Production and Relevant Service Part Organizations
Sector specific guidance to the application of ISO 9001 in the automotive industry.
ISO TS 16949

ISO 14000

ISO Standards - ISO 14000 - Environmental Management
The ISO 14000 Compendium, is a series of international, voluntary environmental management standards. Developed under ISO Technical Committee 207, the 1400 series of standards address the following aspects of environmental management: (1) Environmental Management Systems (EMS), (2) Environmental Labels and Declarations (EL), (3) Life Cycle Assessment (LCA), (4) Environmental Auditing & Related Investigations (EA&RI), (5) Enviromental Performance Evaluation (EPE), and (6) The Terms and Definitions (T&D). The benefits of the ISO 14000 Compendium are as follows: (1) Assuring customers of commitment to demonstrable environmental management, (2) Obtaining insurance at reasonable cost, (3) Meeting vendor certification criteria, (4) Reducing incidents that result in liability, (5) Demonstrating reasonable care, (6) Conserving input materials and energy, (7) Facilitating the attainment of permits and authorizations, (8) Fostering development and sharing environmental solutions, and (9) Improving industry/government relations.
ISO 14000 COMPENDIUM

Includes ISO Guide 64, ISO 14001, 14004, 14010, 14011, 14012, DIS 14015, 14020, 14021, 14024, TR 14025, 14031, TR 14032, 14040, 14041, 14042, 14043, TR 14049, 14050, and TR 14061.

Environmental Management Systems - Specification with Guidance for Use
Gives requirements for an environmental management system, to enable an organization to develope a policy and objectives taking into account legislative requirements and information about significant environmental impacts.
ISO 14001

Guide to Environmental Management Systems - General Guidelines on Principles, Systems, and Supporting Techniques
Contains guidelines on the development and implementation of environmental management systems and principles, and their coordination with other management systems. The guidelines are intended for use as a voluntary, internal management tool and not to be used as EMS certification criteria.
ISO 14004

Guidelines for Quality and/or Environmental Management Systems Auditing
ISO 19011:2002 provides guidance on the principles of auditing, managing audit programs, conducting quality management system audits and environmental management system audits, as well as guidance on the competence of quality and environmental management system auditors. It is applicable to all organizations needing to conduct internal or external audits of quality and/or environmenmtal management systems or to manage an audit program.
ISO 19011

Environmental Management - Environmental Assessment of Sites and Organization (EASO)
ISO 14015

Environmental Labels and Declarations - General Principles
This International Standard establishes guiding principles for the development and use of environmental labels and declarations.
ISO 14020

Environmental Labels and Declarations - Self Declared - Environmental Claims (Type II Environmental Labeling)
ISO 14021

Environmental Labels and Declarations - Type 1 Environmental Labeling - Principles and Procedures
ISO 14024

Environmental Management - Life Cycle Assessment - Goal and Scope Definition and Inventory Analysis
ISO 14041

Environmental Management - Environmental Performance Evaluation - Guidelines
ISO 14031

Environmental Management - Life Cycle Assessment - Life Cycle Impact Assessment
ISO 14042

Environmental Management - Life Cycle Assessment - Principles and Framework
ISO 14040

Environmental Management - Life Cycle Assessment - Life Cycle Impact Assessment
ISO 14043

Environmental Management - Vocabulary
(Bilingual)
ISO 14050

Guide for the Inclusion of Environmental Aspects in Product Standards
ISO GUIDE 64

Environmental Labels and Declarations - Type III Environmental Declarations
ISO TR 14025

Environmental Management - Examples of Environmental Performance Evaluation (EPE)
ISO TR 14032

Environmental Management - Life Cycle Assessment - Examples of Application of ISO 14041 to Goal and Scope Definition, and Inventory Analysis
ISO TR 14049

Information to Assist Forestry Organizations in the Use of the Environmental Management System Standards ISO 14001 and ISO 14004
ISO TR 14061

Quality Control Systems and Services, Inc. (QCSS)

ISO 9000 Quality System Manual and Program

Quality System Manual "ISO 9001-2000" Policies, Objectives, Procedures, Control Forms, Work Instructions, Audit Checklists and Support Standards
QCSS ISO 9001 MANUAL

Quality System Manual "ISO 9001-2000" and Self Implementation Package
Gain ISO 9001, 9002, or 9003 certification quickly and easily with this complete and ready to implement quality system program. The program includes appropriate QS Manual, 3.5 diskette, step-by-step procedure outline, and an instruction guide on how to implement the system.
QCSS ISO 9001 SET

Quality System Manual "ISO 9002"
QCSS ISO 9002 MANUAL

Complete Q.C. Manual & Inspection System Package Per ISO 9002
QCSS ISO 9002 SET

Quality System Manual "ISO 9003"
QCSS ISO 9003 MANUAL

Complete Q.C. Manual & Inspection System Package Per ISO 9003
QCSS ISO 9003 SET

ISO Management Systems Magazine

Did you know that the ISO Management System standards are implemented by more than 430,000 organizations in 158 countries? Ensuring accuracy with the new updates in the ISO 9000 and ISO 14000 arenas is made easier when subscribing to this bimonthly publication. This mission critical product, published by ISO, is now available through Global Engineering Documents®, the retail arm of IHS.
ISO MANAGEMENT SYS

Japanese Industrial Standards (JIS)

Quality Control Handbook
JIS QUALITY CONTROL HDBK

Quality Management Systems - Fundamentals and Vocabulary
This standard describes fundamentals of quality management systems, which forms the subject of the JIS Q 9000 family, and defines related terms. This Standard is applicable to the following: a) organizations seeking advantages through the implementation of a quality management system; b) organizations seeking confidence from their suppliers that their product requirements will be satisfied; c) users of the products; d) those concerned with a mutual understanding of the terminology used in quality management; e) those internal or external to the organization who assess the quality management system or audit it for conformity with requirements of JIS Q 9000; f) those internal or external to the organization who give advice or training on the quality management system appropriate to that organization; and g) developers of related standards.
JIS Q 9000

Quality Management Systems - Requirements
This standard specifies requirements for a quality management system where an organization a) needs to demonstrate its ability to consistently provide product that meets customer and applicable regulatory requirements, and b) aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable regulatory requirements.
JIS Q 9001

Quality Management Systems - Guidelines for Performance Improvements
This standard provides guidelines beyond the requirements given in JIS Q 9001 in order to consider both the effectiveness and efficiency of a quality management system, and consequently the potential for improvement of the performance of an organization. When compared to JIS Q 9001, the objectives of customer satisfaction and product quality are extended to include the satisfaction of interested parties and the performance of the organization. This standard is applicable to the processes of the organization and consequently the quality management principles on which it is based can be deployed throughout the organization. The focus of this standard is the achievement of ongoing improvement, measured through the satisfaction of customers and other interested parties. This standard consists of guidance and recommendations and is not intended for certification, regulatory or contractual use, nor as a guide to the implementation of JIS Q 9001.
JIS Q 9004

Quality Management Systems - Aerospace - Requirements
This standard includes JIS Q 9001:2000 quality management system requirements and specifies additional requirements for a quality management system for the aerospace industry. The additional aerospace requirements are shown in bold, italic text. It is emphasized that the quality management system requirements specified in this standard are complementary (not alternative) to contractual and applicable law and regulatory requirements. This Standard specifies requirements for a quality management system where an organization a) needs to demonstrate its ability to consistently provide product that meets customer and applicable regulatory requirements, and b) aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable regulatory requirements.
JIS Q 9100

Quality Management and Quality Assurance Standards - Part 1: Guidelines for Selection and Use

This standard a) clarifies principal quality-related concepts and the distinctions and interrelationships among them; b) provides guidance for the selection and use of the JIS Z 9900 series of standards on quality management and quality assurance.

JIS Z 9900

Quality Systems - Model for Quality Assurance in Design, Development, Production, Installation and Servicing

This standard specifies quality system requirements for use where a supplier's capability to design and supply conforming product needs to be demonstrated. The requirements specified are aimed primarily at achieving customer satisfaction by preventing nonconformity at all stages from design through to servicing. This standard is applicable in situations when a) design is required and the product requirements are stated principally in performance terms, or they need to be established, and b) confidence in product conformance can be attained by adequate demonstration of a supplier's capabilities in design, development, production, installation and servicing.

JIS Z 9901

Quality Systems - Model for Quality Assurance in Production, Installation and Servicing

This standard specifies quality system requirements for use where a supplier's capability to supply conforming product to an established design needs to be demonstrated. The requirements specified are aimed primarily at achieving customer satisfaction by preventing nonconformity at all stages from production through to servicing. This standard is applicable in situations when a) the specified requirements for product are stated in terms of an established design or specification, and b) confidence in product conformance can be attained by adequate demonstration of a supplier's capabilities in production, installation and servicing.

JIS Z 9902

Quality Systems - Model for Quality Assurance in Final Inspection and Test

This standard specifies quality system requirements for use where a supplier's capability to detect and control the disposition of any product nonconformity during final inspection and test needs to be demonstrated. It is applicable in situations when the conformance of product to specified requirements can be shown with adequate confidence providing that certain suppliers' capabilities for inspection and tests conducted on finished product can be satisfactorily demonstrated.

JIS Z 9903

Quality Management and Quality System Elements - Part 1: Guidelines

This standard provides guidance on quality management and quality system elements. The quality system elements are suitable for use in the development and implementation of a comprehensive and effective in-house quality system, with a view to ensuring customer satisfaction. This standard is not intended for contractual, regulatory or certification use. Consequently, it is not a guideline for the implementing of JIS Z 9901, JIS Z 9902 and JIS Z 9903, ISO 9000-2 should be used for that purpose. The selection of appropriate elements contained in this standard and the extent to which these elements are adopted and applied by an organization depends upon factors such as the market being served, nature of the product, production processes, and customer needs. Reference in this standard to a "product" should be interpreted as applicable to the generic product categories of hardware, software, processed materials, or service (in accordance with the definition of "product" in ISO 8402).

JIS Z 9904

Guidelines for Auditing Quality Systems - Part 1: Auditing

This Japanese Industrial Standard establishes basic audit principles, criteria and practices, and provides guidelines for establishing, planning, carrying out and documenting audits of quality systems. It provides guidelines for verifying the existence and implementation of elements of a quality system and for verifying the system's ability to achieve defined quality objectives. It is sufficiently general in nature to permit it to be applicable or adaptable to different kinds of industries and organizations. Each organization should develop its own specific procedures for implementing these guidelines.

JIS Z 9911-1

Guidelines for Auditing Quality Systems - Part 2: Qualification Criteria for Quality Systems Auditors

This Japanese Industrial Standard gives guidance on qualification criteria for auditors. It is applicable in the selection of auditors to perform quality systems audits as recommended in JIS Z 9911-1.

JIS Z 9911-2

Guidelines for Auditing Quality Systems - Part 3: Management of Audit Programmes

This Japanese Industrial Standard gives basic guidelines for managing quality systems audit programs. It is applicable to the establishment and maintenance of an audit program management function when performing quality systems audits in accordance with the recommendations given in JIS Z 9911-1.

JIS Z 9911-3

American National Standards Institute (ANSI)

Aerial Tramways, Aerial Lifts, Surface Lifts and Tows Safety Requirements
ANSI B77.1

Hazardous Industrial Chemicals - Material Safety Data Sheets - Preparation
ANSI Z400.1

American Society of Safety Engineers (ASSE)

Occupational and Educational Eye and Face Protection
ANSI Z87.1

Safety Requirements for Confined Spaces
ANSI Z117.1

Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components
ANSI Z359.1

Safety Requirements for Workplace Floor and Wall Openings, Stairs and Railing Systems
ANSI A1264.1

ASME International (ASME)

Safety Code for Elevators and Escalators
ASME A17.1

Safety Code for Elevators and Escalators - Handbook
ANSI A17.1 HDBK

Safety Code for Existing Elevators and Escalators
ANSI A17.3

Safety Standard for Conveyors and Related Equipment
ASME B20.1

British Standards Institution (BSI) - Machine Safety

Machine Safety by BSI helps you avoid costly accidents, minimize your liability and potential hazards, as well as meet published safety requirements.

Safety Use of Machinery
BS 5304

Safety of Machinery - Basic Concepts, General Principals for Design

Basic Terminology, Methodology
BS EN 292-1

Safety of Machinery - Basic Concepts, General Principals for Design - Part 2: Technical Principles & Specifications
BS EN 292-2

Safety of Machinery - Electrical Equipment of Machines

Safety of Machinery - Electrical Equipment of Machines - Part 1: Specification for General Requirements
BS EN 60204-1

FM Approvals

Factory Mutual Research approved standards are used to test products for the prevention or minimization of industrial property loss. They take into account global technology and the constantly changing needs of industry. Customers use the FM Approval diamond as a marking tool and a mark of excellence for their products. This indicates quality to potential buyers. Approved standards address the areas of fire protection and extinguishment; electrical equipment for hazardous and ordinary locations; building materials and construction evaluation; detection and signaling; and flammable liquids and combustion.

Automatic Sprinklers for Fire Protection
FM APPROVAL 2000

Electrical Equipment for use in Hazardous (Classified) Locations General Requirements
FM APPROVAL 3600

Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1, and Class I, Zone 0 and 1 Hazardous (Classified) Locations
FM APPROVAL 3610

Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2, Hazardous (Classified) Locations
FM APPROVAL 3611

Explosionproof Electrical Equipment General Requirements
FM APPROVAL 3615

Clean Room Materials Flammability Test Control
FM APPROVAL 4910

Industrial Safety Equipment Association (ISEA)

Emergency Eyewash and Shower Equipment
ANSI Z358.1

Instrumentation, Systems and Automation Society (ISA)

ISA–The Instrumentation, Systems, and Automation Society

Electrical Apparatus for Use in Class I, Zones 0, 1 & 2 Hazardous (Classified) Locations: General Requirements
ISA 12.00.01

Electrical Apparatus for Use in Class I, Zones 0, 1 & 2 Hazardous (Classified) Locations: Intrinsic Safety "I"
ISA 12.02.01

Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations
ISA 12.12.01

Electrical Apparatus for Use in Class I, Zone 2 Hazardous (Classified) Locations - Type of Protection "N"
ISA 12.12.02

Recommended Practice for the Installation, Operation, and Maintenance of Combustible Gas Detection Instruments
ISA RP12.13.02

National Electrical Manufacturers Association (NEMA)

NEMA Setting Standards for Excellence

Safety Color Code
Contains information needed to specify colors for safety signs used in environmental and facility applications, and for accident prevention tags used to alert persons to temporary hazards.
ANSI Z535.1

Environmental and Facility Safety Signs
Contains information needed to specify formats used in environmental and facility applications.
ANSI Z535.2

Criteria for Safety Symbols
Contains information needed to specify formats and symbols for safety signs and accident prevention tags used in environmental and facility applications and for product applications.
ANSI Z535.3

Product Safety Sign and Label
Contains information needed to specify formats for safety signs used in product applications.
ANSI Z535.4

Accident Prevention Tags
Contains information needed to specify formats, colors, and symbols of safety tags used to alert persons to temporary hazards.
ANSI Z535.5

Z535 Standards for Safety Signs and Colors Set
Includes ANSI Z535.1 through ANSI Z535.5.
ANSI Z535 SERIES
ANSI Z535 SERIES CD

Safety Color Chart
For Information and Use with ANSI Z535.1 through ANSI Z535.5.
ANSI Z535 COLOR CHART

Safety Standards for Construction and Guide for Selection, Installation and Operation of Adjustable Speed Drive Systems
NEMA ICS 7.1

Safety Standards and Guide for Selection, Installation, and Use of Electric Motors and Generators
Provides recommendations for the selection, installation, and use of rotating electric machines in such a manner as to provide for the practical safeguarding of persons and property.
NEMA MG 2

Product Safety Guide for Developing Documentation for Fire Alarm Systems and Equipment
NEMA SB 28

National Fire Protection Association (NFPA)

National Electrical Code (NEC)
Please see page 39 for a complete description.
NFPA 70

National Safety Council (NSC)

Safety Requirements for Scaffolding
ANSI A10.8

Personal Protection - Protective Footwear
ANSI Z41

Outdoor Power Equipment Institute (OPEI)

Formerly know as the Portable Power Equipment Manufacturers Association (PPEMA), OPEI is the only trade association exclusively dedicatied to the hand-held, outdoor power equipment industry. It is committed to the preservation of enviornmental quality and the safety and health of industry employees and all portable power equipment users.

Gasoline-Powered Chain Saws Safety Requirement
ANSI B175.1

Power Tools - Hand-held and Backpack, Gasoline-Engine-Powered Blowers
ANSI B175.2

Parachute Industry Association (PIA)

Global is the worldwide distributor of PIA standards. They are available in hardcopy and electronic media formats, including Internet delivery. PIA is in the process of adopting and maintaining more than 275 Military Specifications and Drawings.

Inspection Requirements, Definitions and Classifications of Defects for Parachutes
PIA-STD-849

Verification Testing of Parachute Textile Materials to all Holders of MIL-STD-1525A (USAF)
PIA-STD-1525

Standards Australia (SA)

Measurement of Occupational Health and Safety Performance - Describing and Reporting Occupational Injuries and Disease (Known as the National Standard for Workplace Injury and Disease Recording)
SAA AS 1885.1

Workplace Injury and Disease Recording Standard - Resource Kit
SAA MP58

The Association for Manufacturing Technology (AMT)

Safety Requirements, Construction, Care and Use of Mechanical Power Presses
ANSI B11.1

Safeguarding When Referenced by Other B11 Machine Tool Safety Standards - Performance Criteria for the Design, Construction, Care and Operation
ANSI B11.19

Manufacturing Systems/Cells - Safety Requirements for Construction, Care and Use
ANSI B11.20

Technical Report: Risk Assessment and Risk Reduction - A Guide to Estimate, Evaluate and Reduce Risks Associated with Machine Tools
ANSI B11 TR3

The Institute of Electrical & Electronics Engineers, Inc. (IEEE)

National Electrical Safety Code (NESC)
Please see page 66 for a complete description.
IEEE C2
NESC CD

A Discussion of the National Electrical Safety Code (NESC)
Please see page 66 for a complete description.
NESC HANDBOOK

NESC, NESC Handbook and NESC CD
IEEE NESC & NESC HDBK CD

Alliance for Telecommunications Industry Solutions (ATIS)

Information Interchange - Coded Representation of the North American Telecommunications Industry Manufacturers, Suppliers, and Related Service Companies

This standard provides the coding specifications for representing the names of North American Telecommunications Manufacturers, Suppliers, and Related Service Companies for the purpose of efficient information exchange. This standard contains clauses covering its scope and purpose, definitions, coding specifications, and maintenance agent duties.

ATIS T1.220

Telecom Glossary 2000

The purpose of this standard is to aid interdisciplinary technical communications, and to disseminate the advances in communications technologies benefiting users, vendors, researchers, and developers. Additionally, this standard provides an authoritative source of definitions for standards developers, teachers, technical writers, and all who are active in the telecommunications field.

ATIS T1.523

Alliance for Telecommunications Industry Solutions (ATIS)

Specifications and Dimensions (for Wood Poles)

Consists of specifications and dimensions for wood poles that are to be given preservative treatment as specified by the purchaser. The poles described are considered as simple cantilever members subject to transverse loads only. Requirements for the preservative treatment of poles are not included.

ANSI O5.1

Digital Hierarchy Electrical Interfaces

This revised standard describes the electrical interfaces for the DS1, DS1C, DS2, and DS3 levels of the North American digital telecommunications hierarchy. Compliance with this standard is necessary to achieve satisfactory interworking of the telecommunications network. This revision of the standard includes requirements on essential electrical characteristics measured at the interface, and specifies four additional signals; DS1A, DS4NA, STS-1, and STS-3. The electrical interface for the DS1A (2048) signal has been included to aid in interworking between networks using the North American hierarchy and those using the 2048 kbits/s hierarchy. Frame structure specifications that were previously included are now found in related standards. This standard defines the interface signal and is not intended to be an equipment specification. Accordingly, equipment and cable requirements that were previously listed in the body of the standard have been moved to informative annexes.

ATIS T1.102

Telecommunications - Synchronous Optical Network (SONET) - Basic Description Including Muliplex Structure, Rates, and Formats

This document is the baseline of a series of standards that define a modular family of rates and formats available for use in interfaces generally referred to as SONET. This series of documents is identified by the T1.105 prefix. This document (ANSI T1.105-1995) describes a base rate and format along with a multiplexing scheme. Other characteristics described in this standard are: layering of overhead, definitions of function and position of overhead, frequency justification, scrambling, conditions for setting overhead values, and a standardized set of payload carrying envelopes. As an aid to the reader, a mapping is provided between SONET and SDH terminology. Any differences between the SDH and SONET specifications at the time of approval of this standard which affect interworking are highlighted.

ATIS T1.105

Information Interchange - Representation of National Security Emergency Preparedness (NSEP) Telecommunications Service Priority

This standard provides the specifications, characteristics, and values of the National Security/Emergency Preparedness (NS/EP) - Telecommunications Service Priority (TSP) code. The TSP System is a Federal Communications Commissions system which superseded FCC National Communications System (NCS) Restoration Priority (RP) System. This standard contains sections covering its purpose and scope, code representation, allowable code values, and relative importance of activities associated with services having NSEP TSP designations.

ATIS T1.211

Information Interchange - Coded Representation of the North American Telecommunications Industry Manufacturers, Suppliers, and Related Service Companies

This standard provides the coding specifications for representing the names of North American Telecommunications Manufacturers, Suppliers, and Related Service Companies for the purpose of efficient information exchange. This standard contains clauses covering its scope and purpose, definitions, coding specifications, and maintenance agent duties.

ATIS T1.220

Operations, Administration, Maintenance and Provisioning (OAM&P) Security Framework for Telecommunications Management Network (TMN) Interfaces

This standard is a part of a series of American National Standards that specifies the interface requirements for the Telecommunications Management Network (TMN). This series specifies the use of Open System Interconnection (OSI) protocols and information models for exchanging management information across the TMN interface. This standard defines the guidelines and considerations to be used in implementing OSI security related to the interfaces and communications required to manage the various Operations, Administration, Maintenance, and Provisioning (OAM&P) functions in a TMN.

ATIS T1.233

Telecommunications - Operations, Administration, Maintenance and Provisioning (OAM&P) - Baseline Security Requirements for the Telecommunications Management Network (TMN)

This standard specifies the minimum security features that a TMN should provide in order to reduce the risk of security compromises within a TMN or with another TMN with which it interacts over an X-interface. These security features should, in effect, permit the secure interconnection of TMNs, so that one TMN would not have to communicate with another TMN whose security features are not known. Indeed, in the absence of such a baseline of security features, intrusions into one TMN may compromise the security of other TMNs. This baseline implies specific security requirements on internal interfaces and other components of the TMN which have a major bearing on the security of the network.

ATIS T1.243

Telecommunications - Operations, Administration, Maintenance and Provisioning (OAM&P) - Extension to Generic Network Information Model for Interfaces Between a Service Provider Adminstrative System and Network Elements for (Lawfully Authorized Electronic Surveillance) and Network Elements

This standard specifies information models and functional requirements for the interface between Network Elements (NEs) and a Service Provider Administrative System for Lawfully Authorized Electronic Surveillance (LAES). The network reference model defining the interface is specified in document J-STD-025 Dated December 12, 1997. This standard describes a Service Provider Telecommunications Management Network (TMN) specific configuration management information model (object models and related Operations, Administration, Maintenance, and Provisioning (OAM&P) services) needed to administer the establishment of a law enforcement surveillance. This version contains a set of managed object classes applicable to all services and a specific subset of managed object classes, their attributes and associated services to support the provisioning of NEs.

ATIS T1.260

Fire Resistance Criteria - Part I: Ignitability Requirements for Equipment Assemblies, and Fire Spread Requirements for Interconnection Wire and Cable Distribution Assemblies

This standard defines ignitability requirements and tests for measuring ignitability under controlled laboratory conditions for telecommunications equipment operated in a network equipment facility. The ignitability criteria apply specifically to the various components that comprise telecommunications equipment assemblies, and the fire spread criteria apply to wire and cable. Although compliance with the standard does not guarantee fire safety or fire resistance, its judicious use may limit the frequency of fire ignition in energized telecommunications equipment and the spread of fire in wire and cable assemblies.

ATIS T1.307

DC Power Systems - Telecommunications Environment Protection

This is a protection standard for the design and installation of telecommunications DC power systems in a controlled or limited-access area. This standard is applicable to the design, engineering, installation, and acceptance of centralized DC power systems. This is the only national standard specifically intended for the acceptance of such systems.

ATIS T1.311

Network to Customer Installation Interfaces - Analog Voicegrade Switched Access Lines Using Loop-Start and Ground Start Signaling

This standard provides requirements for loop-start and ground-start signaling for the analog voicegrade interface between carrier switched access lines and customer installations. These requirements are intended to assist carriers, manufacturers, and users of products to be used in the switched network to understand the characteristics of the existing networks.

ATIS T1.401

Telecommunications - Network-to-Customer Installation - DS1 Metallic Interface

This standard provides the requirements for a DS1 metallic interface, referred to as the network interface (NI), for a network-to-customer installation (CI). Requirements include electrical characteristics, format parameters, and physical characteristics at the NI. This standard provides NI compatibility information and is not meant to be an equipment specification.

ATIS T1.403

Telecommunications - Interface Between Carriers and Customer Installations - Analog Voicegrade Enhanced 911 Switched Access Using Network-Provided Reverse-Battery Signaling

This standard provides analog interface requirements for the interconnection of Customer Installations (CIs), such as Private Branch Exchanges, to Enhanced 911 systems. The analog interface allows the CI to transmit the caller's emergency service identification information to an Enhanced 911 system in applications where multiple terminals share Enhanced 911 switched access. These requirements are intended to assist carriers, end-users, and manufacturers.

ATIS T1.411

Telecommunications - Network to Customer Installation Interfaces Enhanced 911 Analog Voicegrade PSAP Access Using Loop Reverse-Battery Signaling

This standard provides network-to-customer installation interface requirements for analog voicegrade Enhanced 911 switched access to a Public Safety Answering Point (PSAP) customer installation (CI). The interface allows a user of the Enhanced 911 System to communicate with PSAP CI and allows the Enhanced 911 switching system to transmit the caller's emergency service identification information to the PSAP CI. These requirements are intended to assist carriers, end-users, and manufacturers.

ATIS T1.414

Spectrum Management for Loop Transmission Systems

This standard provides spectrum management requirements and recommendations for the administration of services and technologies that use metallic subscriber loop cables. Spectrum management is the administration of the loop plant in a way that provides spectral compatibility for services and technologies that use pairs in the same cable. In order to achieve spectral compatibility, the ingress energy that transfers into a loop pair, from services and transmission system technologies on other pairs in the same cable, must not cause an unacceptable degradation of performance. In addition, the egress energy from a particular loop pair must not transfer into other pairs in a manner that causes an unacceptable degradation in the performance of services and technologies on those pairs. This standard includes signal power limits and technology deployment guidelines for digital subscriber line spectrum management classes. It also provides a generic analytical method to determine spectral compatibility.

ATIS T1.417

Telecom Glossary 2000
The purpose of this standard is to aid interdisciplinary technical communications, and to disseminate the advances in communications technologies benefiting users, vendors, researchers, and developers. Additionally, this standard provides an authoritative source of definitions for standards developers, teachers, technical writers, and all who are active in the telecommunications field.
ATIS T1.523

BICSI

BICSI TELECOMMUNICATIONS

BICSI

BICSI was developed as a result of a recognized need for mutual understanding of building telecommunications requirements. BICSI and the Telecommunications Industry Association (TIA) work together, in that TIA establishes guidelines for the telecommunications infrastructure, while BICSI provides information that shows how to implement the guidelines.

Cable Installation Manual
BICSI's Cable Installation Manual is the ideal job function-related reference manual for telecommunications cabling installers. Based on the latest industry standards and codes, the manual provides cabling installation personnel with guidelines (including appropriate "how to" information) necessary to perform specific tasks of their job.
BICSI CABLE INSTALLATION

Customer-Owned Outside Plant Design Manual
BICSI's Customer-Owned Outside Plant Design Manual is written for the individual who designs and maintains the outside plant infrastructure in a campus environment. It provides a comprehensive overview of the components or outside plant design and acts as a refresher course for those with previous outside plant design experience.
BICSI CO-OSP DESIGN MANUAL

Customer Owned Outside Plant Design Manual
2nd Edition
BICSI CO-OSP DESIGN CD

Network Design Reference Manual
More than 300 illustrations, tables, and examples make this manual a "must have" guide for the telecommunications professional. Design methodologies for the physical layer of local area networks are fully covered. The 2nd edition references the latest technologies – Gigabit Ethernet, Dedicated Token-ring, HIPPI, SCI, and SBCON, contains Standards-compliant configuration guidelines for LAN design, discusses the International Cabling Standard ISO/IEC 11801, and contains additional discussions about networking technologies.
BICSI NETWORK DESIGN SET

Includes 2 Volume Manual, 2 Binders, Tabs and CD-ROM

Telecommunications Distribution Methods Manual
Extremely valuable to telecommunications infrastructure designers of commercial and multi-family residential buildings the Telecommunications Distribution Methods Manual (TDMM), provides a comprehensive overview of telecommunications distribution, from design through construction, installation, and maintenance.
BICSI TELECOMMUNICATIONS
BICSI TDMM CD
BICSI TDMM SET

Communications Standard Review (CSR)

The Communications Standard Review (CSR) has developed the following journals to assist in communications product planning and specification.

Communications Standards Summary (CSS) Annual Subscription
Reports the status of all TIA-TR committee active projects and recently completed standards. CSS is a TIA-authorized publication. Includes 4 issues annually.
CSR-CSS

Communications Standard Review (CSR) Annual Subscription
Reports on US (TIA) and International (ITU-T) standards committee meetings in WAN data communications for wireline. Includes 8-9 Issues.
CSR-T

European Telecommunications Standards Institute (ETSI)

The mission of ETSI is to provide common standards for Europe, linking networks and services, and ensuring interoperability of equipment on a European basis.

ETSI Documentation Service
This DVD Documentation Service uses Adobe Acrobat Portable Document Format (PDF). As an annual subscriber you benefit from immediate access to: All editions of ETSI deliverables including the complete set of full text versions of ETSI standards and publications and their electronic attachments, all drafts and final drafts presently in Public Enquiry or Vote, Full-text search and a complete list of deliverables matching the search, and integrated HELP and keyword searching.
ETSI COMPLETE SET

Part 1-1: Classification of Environmental Conditions Storage
ETS 300 019-1-1

Part 1-3: Classification of Environmental Conditions Stationary use at Weather Protected Locations
ETS 300 019-1-3

Equipment Engineering (EE); Power Supply Interface at the Input to Telecommunications Equipment Interface - Part 2: Interface Operated by Direct Current (DC)
ETS 300 132-2

Electromagnetic Compatibility and Radio Spectrum Matters (ERM) Telecommunication Network Equipment; Electromagnetic Compatibility (EMC) Requirements; Part 2: Product Family Standard
ETSI EN 300 386-2

Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Electromagnetic Compatibility (EMC) Standard for Radio Equipment and Services; Part 1: Common Technical Requirements
ETSI EN 301 489-1

Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Electromagnetic Compatibility (EMC) Standard for Radio Equipment and Services; Part 3: Specific Conditions for Short-Range Devices (SRD) Operating on Frequencies Between 9 KHz and 40 GHz
ETSI EN 301 489-3

Information Handling Sevices® (IHS)

Bring industry intelligence to your desktop. Designed to help you develop competitive telecommunications products and apply cutting-edge telecom technology solutions within other industry sectors, the Telecom Worldwide Standards Service offers a comprehensive suite of products. We can meet your specific standards needs whether you design telecom systems, manufacture telecom components, install and maintain telecom equipment, or provide telecom services.

Telecom Standards Collection

This CD-ROM collection provides standards from ANSI, EIA, IEEE, ITU-T, ITU-R, TIA, and UL. Telecom systems is the comprehensive toolkit for telecom systems engineers. This collection provides access to the standards that drive the delivery of data and voice transmissions across network and telephony systems.
Call for quote
IHS ESTS

Fiber Optics Standards Collection

This CD-ROM collection provides standards from ANSI, ASTM, EIA, ETSI, IEEE, ITU-T, and TIA that drive the central fiber optic technologies, including SONET, SDH, FDDI technologies, and Fibre Channel.
Call for quote
IHS ESFO

Premises Wiring & Safety Standards Collection

This CD-ROM collection provides standards from ASTM, CSA, EIA, ICEA, IEEE, ISO, ITU-T, TIA, and UL that drive the design, development, installation and maintenance of safe, reliable telecom infrastructure cable and wiring systems.
Call for quote
IHS ESTBE

Mobile/Wireless Standards Collection

This CD-ROM collection provides standards from EIA, IEEE, ETSI, ITU-T, ITU-R, and TIA that drive the design and construction of PCS and other wireless products and services.
Call for quote
IHS ESMW

Video Standards Collection

This CD-ROM collection provides standards from AES, EIA, IEEE, SMPTE, ITU-T, ITU-R, and TIA for videoconferencing, multimedia data transmission, broadcast and cable television, and program production.
Call for quote
IHS ESVS

ISO/IEC Telecom Standards Collection

This CD-ROM collection provides ISO and IEC standards related to the telecom industry and is the ideal way to round out any of our other collections.
Call for quote
IHS ESISO

JTA Standards Collection

Online subscription access to the Joint Technical Architecture documents and selected referenced commercial standards.
Call for quote
IHS JTA

The Institute of Electrical & Electronics Engineers, Inc. (IEEE)

National Electrical Safety Code (NESC)

Covers basic provisions for safeguarding of persons from hazards arising from the installation, operation or maintenance of conductors and equipment in electrical supply stations, as well as overhead and underground electric supply and communication lines and equipment.
IEEE C2

The Institute of Electrical & Electronics Engineers, Inc. (IEEE)

National Electrical Safety Code (NESC)

Covers basic provisions for safeguarding of persons from hazards arising from the installation, operation or maintenance of conductors and equipment in electrical supply stations, as well as overhead and underground electric supply and communication lines and equipment.
IEEE C2

Insulated Cable Engineers Association (ICEA)

Short Circuit Characteristics of Insulated Cable
ICEA P-32-382

Short Circuit Performance of Metallic Shields and Sheaths on Insulated Cable
ICEA P-45-482

Weather Resistant Polyethylene Covered Conductors
ICEA S-70-547

Fiber Optic Premises Distribution Cable Technical Requirements
ICEA S-83-596

Neutral - Supported Power Cable Assemblies with Weather-Resistant Extruded Insulation Rated 600 Volts
ICEA S-76-474

Optical Fiber Outside Plant Communications Cable
ICEA S-87-640

Standard for Consentric Neutral Cables Rated 5,000 - 46,000 Volts
ICEA S-94-649

Utility Sheilded Power Cables 5 - 46 kV
ICEA S-97-682

International Organization for Standardization (ISO)

Information Technology - Generic Cabling for Customer Premises
Specifies the generic cabling requirements, covering balanced and optical fiber cabling, for use within premises, which may include a single or multiple buildings on a campus.
ISO/IEC 11801

International Organization for Standardization (ISO)

Information Technology - Open Systems Interconnection - Basic Reference Model: The Basic Model
ISO/IEC 7498-1

Information Processing Systems - Open Systems Interconnection - Basic Reference Model - Part 2: Security Architecture
ISO/IEC 7498-2

Information Technology - Open Systems Interconnection - Network Layer Security Protocol
ISO/IEC 11577

Information Technology - Generic Cabling for Customer Premises
Specifies the generic cabling requirements, covering balanced and optical fiber cabling, for use within premises, which may include a single or multiple buildings on a campus.
ISO/IEC 11801

Information Technology - Implementation and Operation of Customer Premises Cabling - Part 1: Administration
ISO/IEC 14763-1

Information Technology - Security Techniques - Evaluation Criteria for IT Security - Part 1: Introduction and General Model
ISO/IEC 15408-1

Information Technology - Code of Practice for Information Security Management
ISO/IEC 17799

Information Technology - Pathways and Spaces for Customer Premises Cabling
ISO/IEC 18010

Information Technology - Guidelines for the Management or IT Security - Part 5: Management Guidance on Network Security
ISO/IEC TR 13335-5

Information Technology - Implementation and Operation of Customer Premises Cabling - Part 2: Planning and Installation of Copper Cabling
ISO/IEC TR 14763-2

International Telecommunication Union (ITU)

The International Telecommunication Union (ITU) is an intergovernmental organization, within which the public and private sectors cooperate for the development of telecommunications and the harmonization of national telecommunication policies. The ITU adopts international regulations and treaties governing all terrestrial and space uses of the frequency spectrum and develops standards to ensure the interconnection of telecommunications systems on a worldwide scale regardless of the type of technology used. It also fosters the development of telecommunications in developing countries. It is, since 1947, the United Nations' specialized agency for telecommunications.

Radiocommunication Sector (ITU-R)

Studio Encoding Parameters of Digital Television for Standard 4:3 and Wide-Screen 16:9 Aspect Ratios
ITU-R BT.601

Interfaces for Digital Component Video Signals in 525-Line and 625-Line Television Systems Operating at the 4:2:2 Level of Recommendation ITU-R BT.601 (Part A)
ITU-R BT.656

Parameter Values for the HDTV Standards for Production and International Programme Exchange
ITU-R BT.709

Ionosperic Propagation Data and Prediction Methods Required for the Design of Satellite Service and Systems
ITU-R P.531

Telecommunications Standardization Sector (ITU-T)

Series G: Transmission System and Media, Digital Systems and Networks; Digital Transmission Systems - Terminal Equipments - General; Physical/Electrical Characteristics of Hierarchical Digital Interfaces
This recommendation specifies the recommended physical and electrical characteristics of the interfaces at hierarchical bit rates as described in ITU-T Recs. G.702 (PDH) and G.707 (SDH). The interfaces are defined in terms of general characteristics, specifications at the output ports and input ports and/or cross-connect points, earthing of outer conductor or screen and coding rules.
ITU-T G.703

Asymmetric Digital Subscriber Line (ADSL) Transceivers
ITU-T G.992.1

Splitterless Asymmetric Digital Subscriber Line (ADSL) Transceivers
ITU-T G.992.2

Optical Interfaces for Equipments and Systems Relating to the Synchronous Digital Hierarchy
ITU-T G.957

Resistibility to Telecommunication Switching Equipment to Overvoltages and Overcurrents
ITU-T K.20

National Electrical Manufacturers Association (NEMA)

Performance Standard for Category 6 and Category 7 100 Ohm Shielded and Unshielded Twisted-Pair Cables
Defines minimum electrical performance and allowable conductor sizes, stranding, and shielding for premise wiring cables for voice and data applications for 100 ohm shielded and unshielded twisted pair cables. Approved as an American National Standard and adopted by the Department of Defense.
NEMA WC 66

National Electrical Manufacturers Association (NEMA)

Electrical and Electronic PTFE (Polytetrafluoro-Ethylene) Insulated High Temperature Hook-Up Wire; Types ET (250 Volts), E (600 Volts) and EE (1000 Volts)
Covers specific requirements for PTFE (polytetrafluoroethylene) insulated solid and stranded wire, designed for the internal wiring of high reliability electrical and electronic equipment.
NEMA HP 3

Electrical and Electronic FEP (Flourinated Ethylene Propylene) Insulated High Temperature Hook-Up Wire, Types KT (250 Volt), K (600 Volt), and KK (1000 Volt)
Covers specific requirements for fluorinated ethylene propylene (FEP) insulated solid and stranded wire, designed for the internal wiring of high reliability electrical and electronic equipment.
NEMA HP 4

Magnet Wire
Definitions, type designations, dimensions, construction, performance, and methods of testing magnet wire generally used in the winding of coils for electrical equipment. Approved as an American National Standard.
NEMA MW 1000

Digital Imaging and Communications in Medicine (DICOM)
Please see page 101 for a complete description.
NEMA PS 3 SET
NEMA PS 3 SET CD

Digital Imaging and Communications in Medicine (DICOM) Part 1: Introduction and Overview
Please see page 101 for a complete description.
NEMA PS 3.1

Digital Imaging and Communications in Medicine (DICOM) Part 2: Conformance
Please see page 101 for a complete description.
NEMA PS 3.2

Digital Imaging and Communications in Medicine (DICOM) Part 3: Information Object Definitions
Please see page 101 for a complete description.
NEMA PS 3.3

Digital Imaging and Communications in Medicine (DICOM) Part 4: Service Class Specifications
Please see page 101 for a complete description.
NEMA PS 3.4

Digital Imaging and Communications in Medicine (DICOM) Part 5: Data Structures and Encoding
Please see page 101 for a complete description.
NEMA PS 3.5

Digital Imaging and Communications in Medicine (DICOM) Part 6: Data Dictionary
Please see page 101 for a complete description.
NEMA PS 3.6

Digital Imaging and Communications in Medicine (DICOM) Part 7: Message Exchange
Please see page 102 for a complete description.
NEMA PS 3.7

Digital Imaging and Communications in Medicine (DICOM) Part 8: Network Communication Support for Message Exchange
Please see page 102 for a complete description.
NEMA PS 3.8

Digital Imaging and Communications in Medicine (DICOM) Part 10: Media Storage and File Format for Media Interchange
Please see page 102 for a complete description.
NEMA PS 3.10

Digital Imaging and Communications in Medicine (DICOM) Part 11: Media Storage Application Profiles
Please see page 102 for a complete description.
NEMA PS 3.11

Digital Imaging and Communications in Medicine (DICOM) Part 12: Media Formats and Physical Media for Media Interchange
Please see page 102 for a complete description.
NEMA PS 3.12

Digital Imaging and Communications in Medicine (DICOM) Part 14: Grayscale Standard Display Function
Please see page 102 for a complete description.
NEMA PS 3.14

Digital Imaging and Communications in Medicine (DICOM) Part 15: Security Profiles
Please see page 102 for a complete description.
NEMA PS 3.15

Digital Imaging and Communications in Medicine (DICOM) Part 16: Content Mapping Resource
Please see page 102 for a complete description.
NEMA PS 3.16

Binational Wire and Cable Packaging Standard
Covers uniform requirements for packaging electrical wire and cable for the North American wire and cable industry.
NEMA WC 26

Performance Standard for Twisted-Pair Premise Voice and Data Communications Cables
Defines minimum electrical performance characteristics, material, and mechanical specifications of premise wiring cables for voice and data applications. Definitions and applicable test methods are included. Adopted by the U.S. Department of Defense as an alternative non-government standard.
NEMA WC 63.1

Performance Standard for Coaxial Premise Data Communications Cable
Defines minimum electrical performance characteristics, material, and mechanical specifications of premise wiring cables for data applications. Definitions and applicable test methods are included. Approved as an American National Standard and adopted by the U.S. Department of Defense as an alternative non-government standard.
NEMA WC 63.2

Performance Standard for Category 6 and Category 7 100 Ohm Shielded and Unshielded Twisted-Pair Cables
Defines minimum electrical performance and allowable conductor sizes, stranding, and shielding for premise wiring cables for voice and data applications for 100 ohm shielded and unshielded twisted pair cables. Approved as an American National Standard and adopted by the Department of Defense.
NEMA WC 66

National Fire Protection Association (NFPA)

National Electrical Code (NEC)
Please see page 39 for a complete description.
NFPA 70
NFPA 70 (LL)
NFPA 70 CD

National Electrical Code (NEC) Handbook
Please see page 65 for a complete description.
NFPA 70 HDBK
NFPA 70 HDBK CD
NFPA 70 HDBK CD Set

National Electrical Code (NEC) Handbook & NFPA 70
Please see page 39 for a complete description.
NFPA 70 Set
NFPA 70 Set (LL)
NFPA 70 SET CD

Society of Cable Telecommunications Engineers (SCTE)

IPCablecom Part 1: Architecture Framework for the Delivery of Time-Critical Services Over Cable Television Networks Using Cable Modems
This document provides the architectural framework that will enable cable television operators to provide time critical services over their networks that have been enhanced to support cable modems.
SCTE 24-1

Society of Cable Telecommunications Engineers (SCTE)

DOCSIS 1.0 Part 1: Radio Frequency Interface
This document defines the radio-frequency interface specifications for high-speed data-over-cable systems. They were developed by Cable Television Laboratories (CableLabs) for the benefit of the cable industry, including contributions by operators and vendors from North America, Europe, and other regions.
SCTE 22-1

DOCSIS 1.0 Part 3: Operations Support System Interface
This document outlines the Management Information Bases (MIBs) for high-speed data-over-cable systems.
SCTE 22-3

DOCSIS 1.1 Part 1: Radio Frequency Interface
This document defines the radio-frequency interface specifications for high-speed data-over-cable systems. They were developed for the benefit of the cable industry, including contributions by operators and vendors from North America, Europe, and other regions.
SCTE 23-1

IPCablecom Part 1: Architecture Framework for the Delivery of Time-Critical Services Over Cable Television Networks Using Cable Modems
This document provides the architectural framework that will enable cable television operators to provide time critical services over their networks that have been enhanced to support cable modems.
SCTE 24-1

Host-POD Interface
This standard defines the characteristics and normative specifications for the interface between Point of Deployment (POD) security modules owned and distributed by cable operators, and commercially available consumer receivers and set-top terminals (“Host devices”) that are used to access multi-channel television programming carried on North American cable systems. These Host devices may also be supplied by the cable operators. The combination of a properly-authorized POD module and a Host device permits the unscrambled display of cable programming that is otherwise protected by a conditional access scrambling system.
SCTE 28

Test Method for AC to DC Power Supplies
To characterize, document and define test methods for AC to DC power supplies. These tests involve the measurement of AC input parameters and DC output parameters. The application of uniform test methods for power supplies will allow fair performance comparisons to be made between different power supplies.
SCTE 46

Methods for Asynchronous Data Transport
This proposal represents transmission format for the carriage of asynchronous data services, compatible with digital multiplex bitstreams constructed in accordance with ISO/IEC 13818-1 (MPEG-2 Systems).
SCTE 53

Digital Video Service Multiplex and Transport System for Cable Television
This document describes the transport layer characteristics and normative specifications of the in-band Service Multiplex and Transport System Standard for Cable Television.
SCTE 54

Digital Broadband Delivery System: Out of Band Transport Part 1: Mode A
The intention of this document is to provide a contribution whose scope is limited to the physical layer specification for Out-Of-Band cable system.
SCTE 55-1

Telcordia Technologies

Telcordia Technologies, formerly Bellcore, plays a developmental role in the telecommunications infrastructure within the U.S. and influences the telecommunications infrastructure around the globe. Telcordia is currently a leader in the development of the network software and associated services that allow IP networks to operate efficiently on a large scale and interconnect with both PSTN and the new IP-based networks.

Generic Requirements for Single-Mode Optical Fiber Connectors
TELCORDIA GR-326-CORE

Electromagnetic Compatibility and Electrical Safety Generic Criteria for Network Telecommunication Equipment (A Module of LSSGR, FR-64 and TSGR, FR-440)
TELCORDIA GR-1089-CORE

Contains GR-1089-ILR Update I1B

Network Equipment-Building System (NEBS) Requirements: Physical Protection (A Module of LSSGR, GR-64, TSGR, FR-440 and NEBS FR, FR-2063)
TELCORDIA GR-63

Generic Requirements for Multi-Fiber Optical Connectors
TELCORDIA GR-1435-CORE

Lawful Access Feature: Switching Generic Requirements
TELCORDIA GR-2973

Generic Requirements for Network Element/Network System (NE/NS) Security
TELCORDIA GR-815

Synchronous Optical Network (SONET) Transprot Systems: Common Generic Criteria
TELCORDIA GR-253-CORE

LATA Switching Systems Generic Requirements (LSSGR): Public Safety
TELCORDIA GR-529

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TELECOM/ELECTRO INDUSTRY TRENDS

Telecommunications Industry Association (TIA)

cdma2000® Series
This series, which is better known as the cdma2000® series, has been prepared to map the capabilities in TIA standards that have been developed to support cdma2000® Phase 1 operation to the major requirements upon which that development was based. The technical requirements contained in cdma2000® form a capability standard for 800 MHz cellular mobile telecommunications systems and 1.8 and 2.0 GHz Code Division Multiple Access (CDMA) Personal Communications Services (PCS) systems. They ensure that a mobile station can obtain service in a cellular or PCS system manufactured in accordance with the cdma2000® standards.
TIA/EIA/IS-2000 SERIES

Interface Between Data Terminal Equipment and Data Circuit-Terminating Equipment Employing Serial Binary Data Interchange
This document is applicable to the interconnection of data terminal equipment (DTE) and data circuit-terminating equipment (DCE) employing binary data interchange.
TIA/EIA-232

Fiber Optic Test Procedures (FOTPs)
These Fiber Optic Test Procedures (FOTPs) were developed to provide uniform procedures for testing Fiber Optic system components for optical communications and data transmission systems. The procedures standardize the method of establishing the light losses and junction efficiency for conformance to individual component requirements. The procedures are applicable for both single fiber and multiple fiber (Bundle) devices.
EIA-455 SERIES

Please call for listing of individual standards contained in this series. Each is also available separately.

Telecommunications Industry Association (TIA)

TIA is a full-service national trade organization with a membership of over 625 large and small companies which provide communications and information technology products, materials, systems, distribution services and professional services in the United States and countries around the world. TIA represents the telecommunications industry in association with the Electronic Industries Alliance. Global can provide you with all TIA standards, specifications, bulletins and publications, as well as journals provided by Communications Standards Review (CSR), and other standards-writing divisions.

Antennas

Structural Standards for Steel Antenna Towers and Antenna Supporting Structures

The objective of this document is to provide minimum criteria for specifying and designing steel antenna towers and antenna supporting structures. This standard is not intended to supersede applicable codes. The information contained in this standard was obtained from sources as referenced and noted herein and represents, in the judgement of the subcommittee, the accepted industry practices for minimum standards for the design of steel antenna supporting structures. This document contains a county by county listing of minimum basic wind speeds, as well as, a commentary on ice and other design criteria. It is for general information only.

TIA/EIA-222

Electrical and Mechanical Characteristics of Earth Station Antennas for Satellite Communications

This document provides standard terms, definitions, and concepts for the mechanical and RF design of earth station antennas, and to offer a standard methodology for the verification of RF performance compatible with current technology and test equipment.

TIA/EIA-411

Cellular - Analog

Mobile Station - Base Station Compatibility Standard

The technical requirements contained in this document form a compatibility standard for cellular mobile telecommunication systems. Their purpose is to ensure that a mobile station can obtain service in any cellular system. These requirements do not address the quality or reliability of that service, nor do they cover equipment performance or measurement procedures.

TIA/EIA-553

TIA/EIA Telecommunications Building Wiring Standards Collection

This premier collection of standards provides you with all of the information needed to plan, design, ground, and install a telecommunications system in a commercial or residential building. These standards will help you establish performance and technical criteria for various cabling configurations. They also specify cable components, transmission performance, system models and the measurement procedures needed for verification of balanced twisted pair and optical fiber cabling systems. Using these standards during the initial planning and construction will allow you to build a telecommunications system that will support a multi-product, multi-vendor environment which will save you significant time and money.

TIA/EIA WIRING STANDARDS

Recommended Minimum Standards for 800 MHz Cellular Subscriber Units

This document details definitions, methods or measurement, and minimum performance characteristics for 800 MHz Cellular Subscriber Units.

TIA/EIA-690

Recommended Minimum Standards for 800 MHz Cellular Base Stations

This document details definitions, methods of measurement and minimum performance characteristics of 800 MHz cellular base stations. These standards share the purpose of the Cellular System Mobile Station-Land Station Compatibility Specification TIA/EIA-553 of assuring that cellular systems in conjunction with their base-station equipment provide service to any subscriber unit that meets the compatibility requirements of TIA/EIA-553.

TIA/EIA-712

Base Station - Mobile Station Compatibility Specification for 800 MHz Cellular, Auxiliary, and Residential Services

This document forms a compatibility standard for a cellular radio telecommunications system. Its purpose is to ensure that a mobile station can obtain service in any cellular system manufactured according to this interim standard.

TIA/EIA/IS-91

Cellular - CDMA

Mobile Station-Base Station Compatibility Standard for Wideband Spread Spectrum Cellular Systems

This document defines the requirements for a PCS/Cellular system and mobile and base stations using Code Division Multiple Access (CDMA) technology while also maintaining compatibility with AMPS analog technology.

TIA/EIA-95

Recommended Minimum Performance Standard for Base Stations Supporting Dual-Mode Spread Spectrum Cellular Mobile Stations

This document details definitions, methods of measurement and minimum performance requirements for 800 MHz cellular base stations supporting wideband spread spectrum, dual-mode mobile stations. This standard shares the purpose of IS-95, “Mobile Station - Base Station Compatibility Standard for Dual-Mode Wideband Spread Spectrum Cellular System,” (and subsequent revisions thereof) by ensuring that a mobile station can obtain service in any cellular system.

TIA/EIA-97

Recommended Minimum Performance Standards for Dual-Mode Spread Spectrum Mobile Stations

This document details definitions, methods of measurement and minimum performance characteristics of 800 MHz cellular mobile stations. This standard shares the purpose of IS-95 (and subsequent revisions thereof) by ensuring that a mobile station can obtain service in any cellular system that meets the capability requirements of IS-95.

TIA/EIA-98

Short Message Service for Spread Spectrum Systems

This document allows the exchange of short messages between a mobile station and the wireless system, and between the wireless system and an external device capable of transmitting and optionally receiving short messages. The external device may be a voice telephone, a data terminal or a short message entry system.

TIA/EIA-637

Over-the-Air Service Provisioning of Mobile Stations in Spread Spectrum Systems

This document describes Over-the-Air Service Provisioning in CDMA and analog systems. The procedures defined are intended to be extendable and flexible enough to be used with future air interface specifications. The procedures in this document do not require support for continuation of the service provisioning process following a CDMA-to-analog handoff.

TIA/EIA-683

Signaling Conformance Tests for CDMA 2000 Spread Spectrum Systems

This document facilitates interoperability testing between CDMA infrastructure and CDMA mobile station manufacturers.

TIA/EIA-898

Enhanced Variable Rate Codec, Speech Service Option 3 for Wideband Spread Spectrum Digital Systems

This document describes the technical requirements for Service Option 3, an enhanced variable rate, two-way speech service option, known as Enhanced Variable Rate Codec (EVRC). Service Option 3 conforms to the general requirements for service options specified in IS-95A and ANSI J-STD-008. A mobile station operating in wideband spread spectrum (CDMA) mode conforming with IS-95A or J-STD-008 and this document can obtain speech service in any cellular system conforming with this family of standards. This document does not address the quality or reliability of Service Option 3, nor does it cover equipment performance or measurement procedures.

TIA/EIA/IS-127

Data Service Options for Wideband Spread Spectrum Systems

This document describes data services available on wideband spread spectrum systems. It is organized into a series of related recommendations, some of which address functions common to all code division multiple access data services, and others which describe a specific data service.

TIA/EIA/IS-707

Minimum Performance Standard for the Enhanced Variable Rate Codec, Speech Service Option 3 for Spread Spectrum Digital Systems

This document details definitions, methods of measurement, verification of bit-exactness and minimum performance characteristics of IS-127 Enhanced Variable-rate Speech Codecs for Digital Cellular Spread Spectrum Mobile Stations and Base Stations. This standard shares the purpose of the most current editions of IS-98 and IS-97. This is to ensure that a mobile station can obtain service in any cellular system that meets the compatibility requirements of IS-95.

TIA/EIA/IS-718

Position Determination Service Standard for Dual Mode Spread Spectrum Systems

This document defines a set of signaling messages between the mobile station and base station to provide a position determination service.

TIA/EIA/IS-801

High Rate Packet Data Air Interface Specification

This specification is primarily oriented toward requirements necessary for the design and implementation of access terminals.

TIA/EIA/IS-856

cdma2000® Series

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TIA/EIA/IS-2000 SERIES
TIA/EIA/IS-2000 SERIES CD

Cellular - Digital Packet Data

Cellular Digital Packet Data System Speficiation Series

This collection consists of 44 parts. Individual parts are available for purchase. Please call for pricing.

TIA/EIA-732 SET

Cellular - General

MSC-BS Interface for Public Wireless Communications Systems

This document describes the overall system functions, including services and features required for interfacing a Base Station (BS) with the Mobile Switching Center (MSC). This document provides an understanding of the BS-MSC interface. Establishing a standard MSC-BS Interface allows the BS and MSC equipment to evolve independently and to be provided by multiple vendors.

TIA/EIA-634

Tandem Free Operation (TFO)

This service description document details the Inband Signaling Protocol between Transcoder/Rate Adapter Units (TRAU) for speech traffic channels for the Tandem Free Operation (TFO) of Speech Codecs, somtimes also termed “Vocoder Bypass”.

TIA/EIA-829

Cellular - Intersystem Standards

Cellular Radiotelecommunications Intersystem Operations
This document identifies those cellular services that require intersystem cooperation, to present the general background against which those services are to be provided, and to summarize the principal considerations which have governed and directed the particular approaches taken in the procedural recommendations.
TIA/EIA-41

Wireless Telecommunications Ai-Di Interfaces Standard
The purpose of this document is to enable the Cellular Carrier and an Exchange Carrier, Interexchange Carrier, International Carrier, Consolidated Carrier, or other carrier to provide interconnecting equipment that operates compatibly. This document provides signaling protocol requirements for the interface located between a Cellular Carrier Network and an EC, IC, INC, Consolidated Carrier or other carrier network.
TIA/EIA-93

Wireless Radio Telecommunications Intersystem Non-Signaling Data Communication DMH (Data Message Handler)
This document describes the procedures and messages necessary to provide to wireless service providers nonsignaling data communications requiring interaction between different wireless systems.
TIA/EIA-124

Cellular Features Description
This document presents a recommended plan for the implementation of Uniform Features for use in the Cellular Radiotelephone Service. Its intent is to describe services and features so that the manner in which a subscriber may place calls using such features and services may remain reasonably consistent from system to system.
TIA/EIA-664

IS-41-C Enhancements for Circuit Mode Services
This telecommunication service allows digital wireless subscribers to send and receive asynchronous data. ADS provides functionality similar to a wireline modem in that the data is modified to make it suitable for transporting over the appropriate medium. Both wireless and wireline media are accommodated to support interworking between the two networks in a way that is transparent to the terminal equipment. The subscriber's terminal equipment interfaces to a conventional DCE data port. The far-end DCE interworks each end function as if connected to a compatible device. ADS is applicable to data telecommunication services. ADS is applicable to voice services in those cases where a voice call is made prior to a user initiated voice to data service change.
TIA-737

Cellular Radiotelecommunications Intersystem Operations - Over-the-Air Service Provisioning (OTASP) & Parameter Administration (OTAPA)
This document includes a Stage-1 recommendation for Over-the-Air Service Provisioning (OTASP) subscriber feature description, provides intersystem operation recommendations for supporting the OTASP capability for the CDMA and TDMA air interfaces with Stage-2 operations, scenarios and Stage-3 operations and parameter definitions, plus Stage-3 procedures.
TIA/EIA/IS-725

Wireless Intelligent Network
This document outlines operational procedures and modifications for TIA/EIA-664.
TIA/EIA/IS-771

WIN Pre-Paid Charging
Pre-paid charging (PPC) allows the subscriber to pay for voice telecommunication services prior to usage. This document presents a recommended plan for the implementation of Wireless Intelligent Network (WIN) capabilities that support PPC for use in the Wireless Radiotelephone Service.
TIA/EIA/IS-826

Cellular - TDMA

TDMA Third Generation Wireless Standards
TIA/EIA-136 SERIES

Telecommunications - Telephone Terminal Equipment - Type 2 Caller Identity Equipment Performance Requirements
This document addresses the technical issues associated with Type 2 Caller Identity Customer Premise Equipment (CPE) for services such as Calling Identity Delivery on Call Waiting which uses Off-Hook signaling with data frames packaged in Multiple Data Message Format (MDMF).
TIA/EIA-777

TDMA Cellular/PCS - Radio Interface - Minimum Performance Standards for Discontinuous Transmission Operation of Mobile Stations
This document specifies the procedures to be employed to verify that implementations of VAD processing in conjunction with the IS-641 DTX/CNG feature to meet strict minimum performance requirements.
TIA/EIA/IS-727

Data Interchange Transmission Equipment

Interface Between Data Terminal Equipment and Data Circuit-Terminating Equipment Employing Serial Binary Data Interchange
This document is applicable to the interconnection of data terminal equipment (DTE) and data circuit-terminating equipment (DCE) employing binary data interchange.
TIA/EIA-232

Electrical Characteristics of Balanced Voltage Digital Interface Circuits
Specifies the electrical characteristics of the balanced voltage digital interface circuit normally implemented in integrated circuit technology.
TIA/EIA-422

Electrical Characteristics of Generators and Receivers for Use in Balanced Digital Multipoint Systems
Specifies the electrical characteristics of generators and receivers that may be employed when specified for the interchange of binary signals in multipoint interconnection of digital equipment. When implemented within the guidelines of this document, multiple generators and receivers may be attached to a common interconnecting cable.
TIA/EIA-485

High Speed 25-Position Interface for Data Terminal Equipment and Data Circuit-Terminating Equipment, Including Alternative 26-Position Connector
This document is applicable to the interconnection of data terminal equipment (DTE) and data circuit-terminating equipment (DCE) employing serial binary data interchange with control information exchanged on separate control circuits. It defines signal characteristics; interface mechanical characteristics; and, functional description of interchange circuits.
TIA/EIA-530

Electrical Characteristics of Low Voltage Differential Signaling (LVDS) Interface Circuits
This document specifies low voltage differential signaling (LVDS) generators and receivers capable of operating at data signaling rates up to 655 Mbit/s, devices may be designed for data signaling rates less than 655 Mbit/s, 100 Mbit/s for example, when economically required for that application.
TIA/EIA-644

Fiber Optics - Connectors, Specifications

Fiber Optic Connector Intermateability Standards
This document, together with its addenda, provides standards for the intermateability of fiber connectors. Each addendum to this document is a Fiber Optic Connector Intermateability Standard (FOCIS) for a particular type or design of fiber optic connector. The intermateability requirements in a FOCIS apply to mating optical components such as connector plugs, adapters, and receptacles. The intermateability requirements in a FOCIS are to be for completed product. For example, for a connector plug the requirements are to be the requirements for the plug mounted with the fiber installed and ready to use.
TIA/EIA-604

Call for pricing and availability for all FOCIS Standards.

Fiber Optics - General

100 Mbis Physical Layer Medium Dependent Sublayer and 10 Mbis Auto-Negotiation on 850 nm Fiber Optics
This document specifies the 100BASE-X-PMD (including MDI) and fiber optic medium for a short wavelength, multimode fiber, 100BASE-SX.
TIA/EIA-785

Fiber Optics - Optical Fiber Systems Testing

Standard Test Procedures for Fiber Optic Systems
These documents provide uniform test procedures for testing all or part of fiber optic systems or subsystems intended for optical communications and data transmission use.
TIA/EIA-526 SERIES

Please call for listing of individual standards contained in this series. Each is also available separately.

Fiber Optics - Test Procedures (FOTPs)

Fiber Optic Test Procedures (FOTPs)
These Fiber Optic Test Procedures (FOTPs) were developed to provide uniform procedures for testing Fiber Optic system components for optical communications and data transmission systems. The procedures standardize the method of establishing the light losses and junction efficiency for conformance to individual component requirements. The procedures are applicable for both single fiber and multiple fiber (Bundle) devices.
EIA-455 SERIES

Please call for listing of individual standards contained in this series. Each is also available separately.

Land Mobile Communications - Equipment

Land Mobile FM or PM Communications Equipment Measurement and Performance Standards
This document provides definitions, method of measurements and performance standards for radio equipment used in the Private (Dispatch) Land Mobile Services that employ FM or PM modulation, for transmission of voice or data using analog or digital techniques, with a frequency of 1 GHz or less.
TIA-603

Wireless Communications Systems - Performance in Noise and Interference-Limited Situations - Recommended Methods for Technology-Independent Modeling, Simulation, and Verification
The purpose of this document is to define and advance a scientifically sound standardized methodology for addressing technology compatibility. This document provides a formal structure and quantitative technical parameters from which automated design and spectrum management tools can be developed based on proposed configurations that may temporarily exist during a migration process or for longer term solutions for systems that have different technologies.
TIA/EIA TSB 88

Land Mobile Communications - Private Radio (APCO/PROJECT 25/102 Series)

Telecommunications, Land Mobile Communications (APCO/Project 25)
This series is a combination of all documents and bulletins (TSB) which are related to APCO/Project 25.
TIA/EIA 102 SERIES

Please call for listing of individual standards contained in this series. Each is also available separately.

Surveillance

Lawfully Authorized Electronic Surveillance
This document defines the interfaces between a telecommunications service provider (TSP) and a law enforcement agency (LEA) to assist the LEA in conducting lawfully authorized electronic surveillance.
TIA/EIA/IS-J-STD-025

Lawfully Authorized Electronic Surveillance (CALEA)
This standard defines the interfaces between a telecommunication service provider (TSP) and a law enforcement agency (LEA) to assist the LEA in conducting lawfully authorized electronic surveillance. A TSP, manufacturer, or support service provider that is in compliance with this standard will have a "safe harbor" under Section 107 of the Communications Assistance for Law Enforcement Act (CALEA), Public Law 103-414.
J-STD-025

Telephones/Terminal Equipment - Part 68 (FCC) Guidelines

Telecommunications - Telephone Terminal Equipment - Technical Requirements for Connection of Terminal Equipment to the Telephone Network

This document specifies technical criteria for terminal equipment approved in accordance with 47 CFR 68 for direct connection to the public switched telephone network, including private line services provided over wireline facilities owned by providers of wireline telecommunications.

TIA/EIA/IS-968

Part 68 Rationale and Measurement Guidelines

This document covers test procedures, test equipment and guidelines for determining compliance with the technical requirements of Part 68 of the Federal Communicaitons Commission's (FCC) Rules and Regulations. Part 68 contains the minimum technical standards that customer premises equipment (CPE) must meet in order to be directly connected to the telephone network. These rules specify those technical standards necessary to assure that CPE will not cause harm to the telephone network. The technical standards of Part 68 cover four broad categories of network harm: (1) Limitations to voltages or other signals that could be harmful to telephone company equipment or craftpersons; (2) Limitations to maximum signal power applied to the network to avoid interference with other telephone network services and users; (3) Limitations to longitudinal imbalance which may cause crosstalk interferences in the wire cable plant; and (4) Limitations to CPE functions that can interfere with the operation of telephone companies' billing equipment.

TIA/EIA TSB 31

Telephones/Terminal Equipment - PBX

Requirements for Private Branch Exchange (PBX) Switching Equipment

This document establishes performance and technical criteria for interfacing and connecting with the various elements of public and private telecommunications networks. Compliance with these requirements should assure quality service.

TIA/EIA-464

Telephones/Terminal Equipment - Telephones

Telecommunications - Telephone Equipment Terminal Equipment - Performance and Compatibility Requirements for Telephone Sets with Loop Signaling

This document provides performance and compatibility requirements for telephone sets intended for direct tip and ring connection to central office (CO) or private branch exchane (PBX) lines.

TIA/EIA-470

Wiring/Cabling

TIA/EIA Telecommunications Building Wiring Standards Collection

This premier collection of standards provides you with all of the information needed to plan, design, ground, and install a telecommunications system in a commercial or residential building. These standards will help you establish performance and technical criteria for various cabling configurations. They also specify cable components, transmission performance, system models and the measurement procedures needed for verification of balanced twisted pair and optical fiber cabling systems. Using these standards during the initial planning and construction will allow you to build a telecommunications system that will support a multi-product, multi-vendor environment which will save you significant time and money.

TIA/EIA WIRING STANDARDS
TIA/EIA WIRING CD
TIA/EIA WIRING CD RENEWAL

Network pricing available. Call for details.

The collection contains the standards listed below. Each is available for purchase individually or save when you buy the set.

Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant - OFSTP-7

The intent of this test procedure is to ensure that meaningful data describing the optical loss performance of installed single-mode cable plant can be obtained. It is not intended for component testing, nor does it define those elements of an installation that must be measured. The document that invokes this procedure shall establish the requirements for installation, maintenance, repair, and conformance testing.

TIA/EIA-526-7

Optical Power Loss Measurement of Installed Multimode Fiber Cable Plant - OFSTP-14A

The intent of this document is to establish preferred measurement principles and practices to assure that meaningful data describing the optical loss performance of installed cable plant can be obtained. It is not intended for component testing, nor does it define those elements of an installation that must be measured. Establishment of requirements for installation, maintenance, repair, or conformance testing is left to the specifier of this test method.

TIA/EIA-526-14

Commercial Building Telecommunications Cabling Standards - Part 1: General Requirements

Specifies a generic telecommunications cabling system for commercial buildings that will support a multi-product, multi-vendor environment.

TIA/EIA-568-1

Commercial Building Telecommunications Cabling Standards - Part 2: Balanced Twisted-Pair Cabling Components

Specifies cabling components, transmission, system models, and the measurement procedures needed for verification of balanced twisted-pair cabling.

TIA/EIA-568-2

Optical Fiber Cabling Components Standard

Specifies the component and transmission requirements for an optical fiber cabling system (e.g., cable, connectors).

TIA/EIA-568-3

Commercial Building Standard for Telecommunications Pathways and Spaces

This document encompasses telecommunications considerations both within and between buildings. The aspects covered are the pathways into which telecommunications media are placed, and the rooms and areas associated with the building used to terminate media and install telecommunications equipment.

TIA/EIA-569

Residential Telecommunications Cabling Standard

This document standardizes requirements for residential telecommunications cabling. These requirements are based on the facilities that are necessary for existing and emerging telecommunications services.

TIA/EIA-570

Optical Fiber Cable Color Coding

This document defines the recommended identification scheme or system for individual fibers, fiber units, or a group of fiber units within a cable structure. May be used to identify appropriate fibers for the purpose of connecting and terminating within a communications system or topography of long haul, feeder routs, subscriber, or distribution applications for on premises and outside plant use.

TIA/EIA-598

Administration Standard for the Telecommunications Infrastructure of Commercial Buildings

The purpose and intent of this document is to provide a uniform administration scheme that is independent of applications, which may change several times throughout the life of a building. This standard establishes guidelines for owners, end users, manufacturers, consultants, contractors, designers, installers, and facilities administrators involved in the administration of the telecommunications infrastructure or related administration system.

TIA/EIA-606

Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications

The purpose of this standard is to enable the planning, design, and installation of telecommunications grounding and bonding systems within a building with or without prior knowledge of the telecommunications systems that will subsequently be installed. This standard also provides recommendations for grounding and bonding of customer owned towers and antennas. This telecommunications grounding and bonding infrastructure supports a multivendor, multiproduct environment as well as various system installation practices.

J-STD-607

Customer-Owned Outside Plant Telecommunications Cabling Standard

This document provides requirements used in the design of the telecommunication pathways and spaces, and the cabling installed between buildings or points in a customer-owned campus environment. Customer-owned campus facilities are typically termed “outside plant” (OSP). For the purpose of this standard, they are termed “Customer-owned OSP”.

TIA/EIA-758

Commercial Building Telecommunications Cabling Standards Set

Includes: Part I: General Requirements, Part II: Balanced Twisted-Pair Cabling Components, and Part III: Optical Fiber Cabling Components Standard.

TIA/EIA-568 SET

The Institute of Electrical & Electronics Engineers, Inc. (IEEE)

IEEE Networking the World

National Electrical Safety Code (NESC)

Covers basic provisions for safeguarding of persons from hazards arising from the installation, operation or maintenance of conductors and equipment in electrical supply stations, as well as overhead and underground electric supply and communication lines and equipment.

IEEE C2
NESC CD

A Discussion of the National Electrical Safety Code (NESC)

The NESC Handbook pulls together facts, figures, and explanations that help you effectively implement the code.

NESC HANDBOOK

NESC and NESC Handbook Set

Includes the Code and the Handbook.

IEEE NESC AND NESC HDBK

IEEE LAN/MAN 802 Standards

IHS offers the complete collection of the 802 Series LAN/MAN Standards via the Internet. With regular update notification of new and revised standards by e-mail and free download of documents online, this collection gives you continuous access to the most popular 802 series technical standards. Includes all of the following: Overview & Architecture (802); LAN/MAN Bridging & Management (802.1); Conformance Test Methodology for IEEE (802.3); Logical Link Control (802.2); CSMA/CD Access Method (802.3); Token-Passing Bus Access Method (802.4); Token-Ring Access Method (802.5); DQDB Access Method (802.6); Broadband LAN (802.7); Integrated Services (802.9); LAN/MAN Security (802.10); Wireless (802.11); and Demand Priority Access Method (802.12).

Call for quote

IHS SN120

Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer

IEEE 802.3

Includes 802.3AB, 802.3AC, and 802.3AD.

Standard for Interoperable LAN/MAN Security (SILS)

IEEE 802.10

Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications

IEEE 802.11

Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications - High Speed Physical Layer in the 5 GHz Band

IEEE 802.11A

Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: Higher Speed Physical Layer Extension in the 2.4 GHz Band

IEEE 802.11B

Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: Amendment 3: Specification for Operation in Additional Regulatory Domains
IEEE 802.11D

Electromagnetic Compatibility Radiated Emission Measurements in Electromagnetic Interference (EMI) Control Calibration of Antennas
IEEE C63.5

Underwriters Laboratories, Inc. (UL)

Information Technology and Business Equipment
UL Set 14 includes UL 1012, UL 1459, and UL 60950. Order the complete set of standards and save over the price of the individual documents.
UL SET 14

Power Units Other than Class 2
UL 1012

Telephone Equipment
UL 1459

Safety of Information Technology Equipment
UL 60950

Wire and Cables Flammability Tests
UL Set 19 includes UL 1581 and UL 1685. Order the complete set of standards and save over the price of the individual documents.
UL SET 19

Reference Standard for Electrical Wires, Cables, and Flexible Cords
UL 1581

Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables
UL 1685

Test for Flame Propagation Height of Electrical and Optical-Fiber Cables Installed Vertically in Shafts
UL 1666

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AUTOMOTIVE INDUSTRY TRENDS

National Electrical Manufacturers Association (NEMA)

Traffic Control Systems (Not Recommended for New Designs)

Defines traffic signaling equipment used to facilitate and expedite the safe movement of vehicular and pedestrian traffic. This standard has been reaffirmed to make it available for support of legacy traffic control equipment. For new equipment installations, the use of TS 2, "Traffic Controller Assemblies with NTCIP Requirements," is recommended.

NEMA TS 1

Traffic Controller Assemblies with NTCIP Requirements

Defines a performance-oriented standard for traffic signaling equipment used to facilitate and expedite the safe movement of vehicular and pedestrian traffic. Also includes requirements for equipment compliance with the National Transportation Communications Protocol (NTCIP) standards when installed.

NEMA TS 2

NTCIP Transit Data Dictionaries Set

Contains NTCIP 1400, 1401, 1402, 1403, 1404, 1405, 1406, 1407, and 1408.

NTCIP 1400 SET

National Transportation Communications for ITS Protocol (NTCIP)

NTCIP standards are jointly developed and maintained by AASHTO (American Association of State Highway and Transportation Officials); ITE (Institute of Transportation Engineers); and NEMA (National Electrical Manufacturers Association). These standards provide both the rules for communicating (called protocols) and the vocabulary (called objects) necessary to allow electronic traffic control equipment from different manufacturers to operate with each other as a system, thus reducing the need for reliance on specific equipment vendors and customized one-of-a-kind software.

Simple Transportation Management Framework

Describes the simple transportation management framework used for managing and communicating information between management stations and transportation devices. Covers integrated management of transportation networks, networking devices, and transportation-specific equipment attached to NTCIP-based networks.

NTCIP 1101

Global Object Definitions

Covers common object definitions supported by NTCIP compliant devices, including actuated signal controllers and variable message signs.

NTCIP 1201

Object Definitions for Actuated Traffic Signal Controller Units

This NTCIP Device Data Dictionary Standard defines the data elements and conformance requirements for Actuated Traffic Signal Controller Units. It defines requirements that are applicable to all NTCIP Actuated Traffic Signal Controller Units and it also contains optional and conditional clauses that are applicable to specific environments for which they are intended. The data elements are defined using the Simple Network Management Protocol (SNMP) object-type format as defined in RFC1212 and would typically be exchanged using one of the NTCIP-recognized Application Layers (e.g. SNMP).

NTCIP 1202

Object Definitions for Dynamic Message Signs (DMS)

This NTCIP Device Data Dictionary Standard defines the data elements and conformance requirements for Dynamic Message Signs. It defines requirements that are applicable to all NTCIP Dynamic Message Signs and it also contains optional and conditional clauses that are applicable to specific environments for which they are intended. The data elements are defined using the Simple Network Management Protocol (SNMP) object-type format as defined in RFC1212 and would typically be exchanged using one of the NTCIP-recognized Application Layers (e.g. SNMP).

NTCIP 1203

Object Definitions for Environmental Sensor Stations (ESS)

Provides definitions of data elements for use with environmental sensor stations (ESS).

NTCIP 1204

Object Definitions for Closed Circuit Television (CCTV) Camera Control

Limited to the functionality related to CCTV Camera Control within a transportation environment. Defines objects which are specific to CCTV and also defines standardized object groups which can be used for conformance statements.

NTCIP 1205

Object Definitions for Ramp Meter Control (RMC) Units

Limited to the functionality related to RMCs used within a transportation environment. The limits and descriptions of the parameters are established to give users maximum flexibility to operate devices that exist now or in the future.

NTCIP 1207

NTCIP Roadside Device Data Dictionaries Set

NTCIP 1200 SET

NTCIP Transit Data Dictionaries Set

Contains NTCIP 1400, 1401, 1402, 1403, 1404, 1405, 1406, 1407, and 1408.

NTCIP 1400 SET

TCIP Framework Standard

Covers the data needs of the functions related to the support of Public Transportation operations, service, and planning. This includes all input and output data needed for Fare Collection; Scheduling/Runcutting; Passenger Information; Incident Management; Vehicle On-board; Transit Control Center; and Traffic Management.

NTCIP 1400

Standard on Common Public Transporation (CPT) Objects
Describes the set of infrastructure (fixed and rolling) data such as vehicles, employees, facilities, and assets for common public transportation objects.
NTCIP 1401

Standard on Incident Management (IM) Objects
Covers the data needs related to detecting, verifying, prioritizing, responding to, and clearing unplanned events (such as accidents, weather conditions, crimes, etc.) that affect transit operations.
NTCIP 1402

Standard on Passenger Information (PI) Objects
Covers the data needs related to providing passengers and potential passengers with the information for planning and making trips using public transportation, including input data associated with traveler preferences, estimated time of arrival, and published schedules.
NTCIP 1403

Standard on Scheduling/Runcutting (SCH) Objects
Covers the data needs of the functions related to scheduling and runcutting, including all input data needed to develop the master schedule, trip sheet, run guides, paddles, and inventory files.
NTCIP 1404

Standard on Spatial Representation (SP) Objects
Provides other transit business areas with a vocabulary and formats for representing common attributes for referencing objects in space.
NTCIP 1405

Standard on On-Board (OB) Objects
The on-board domain covers the data needs of the functions related to on-board applications. This includes all data needed for the communications between on-board components within a public transportation vehicle and other transit applications. The data objects defined in this specification are critical to transit agencies because they provide information (such as AVL information) for vehicle performance monitoring and transit operations.
NTCIP 1406

Standard on Control Center (CC) Objects
The control center domain covers the data needs of the functions related to control center applications. The control center functions span various components and systems within transportation and operations.
NTCIP 1407

Standard on Fare Collection (FC) Business Area Objects
The fare collection domain covers the data needs for the functions related to fare policies, and selling, collection, processing, and accounting of fares from passengers. The business area also includes data needs related to the monitoring and maintenance of equipment related to the selling, collection, and processing of fare media.
NTCIP 1408

National Transportation Communications for ITS Protocol - Class B Profile
A communications protocol standard for interconnecting transportation and traffic control equipment. It establishes a common method of interconnecting ITS field equipment, such as traffic controllers and variable message signs (VMS), defines the protocol and procedures for establishing communications between those components, and references common data sets to be used by all such equipment.
NTCIP 2001

Point to Multi-Point Protocol using RS-232 Subnetwork Profile
A communications protocol standard for interconnecting transportation and traffic control equipment. It establishes a common method of interconnecting ITS field equipment, such as traffic controllers and variable message signs (VMS), defines the protocol and procedures for establishing communications between those components, and references common data sets to be used by all such equipment.
NTCIP 2101

Point to Multi-Point Protocol Using FSK Modem Subnetwork Profile
Applicable to transportation related devices that must operate in a typical primary/secondary configuration where one device is the designated primary while one or more other devices are connected to one channel acting as secondaries. As a subnetwork profile, it specifies a set of protocols and standards applicable to the data link and physical layers of the OSI Reference Model.
NTCIP 2102

Internet (TCP/IP and UDP/IP) Transport Profile
Applies to transportation devices and management systems that must operate in Intelligent Transportation Systems. As a transport profile, it specifies a set of protocols and standards applicable to the transport and network layers of the ISO-OSI Reference Model.
NTCIP 2202

Simple Transportation Management Framework Application Profile
Applies to transportation devices and management systems that must operate in an Intelligent Transportation System.
NTCIP 2301

Trivial File Transfer Protocol Application Profile
Applies to traffic control and transportation related devices that must operate in an Intelligent Transportation System.
NTCIP 2302

File Transfer Protocol Application Profile
Applies to traffic control and transportation devices concerned with operating in an Intelligent Transportation System. As an NTCIP application profile, it specifies a set of protocols and standards for the application, presentation, and session layers of the ISO-OSI Reference Model.
NTCIP 2303

Profile Framework
Applies to traffic control and transportation related devices which must operate in an Integrated Transportation System. Develops the terminology, content, structure, and organization of standardized profiles.
NTCIP 8003

Complete Set of National Transportation Communications for ITS Protocol (NTCIP) Standards
NTCIP COMPLETE SET

SAE International (SAE)

Listed below are SAE standards that are referenced in the NCTIP documents.

Joint SAE/TMC Recommended Environmental Practices For Electronic Equipment Design (Heavy-Duty Trucks)

The climatic, dynamic, and electrical environments from natural and vehicle-induced sources that influence the performance and reliability of vehicle and tractor/trailer electronic components, are included in this SAE recommended practice. Test methods that can be used to simulate these environmental conditions are also included. This information is applicable to diesel power trucks in Classes 6, 7, and 8.

SAE J1455

Electronic Data Interchange Between Microcomputer Systems in Heavy-Duty Vehicle Applications

This SAE recommended practice defines a document for the format of messages and data that is of general value to modules on the data communications link. Included are field descriptions, size, scale, internal data representation, and position within a message. This document also describes guidelines for the frequency of and circumstances in which messages are transmitted.

SAE J1587

(R) Serial Data Communications Between Microcomputer Systems In Heavy Duty Vehicle Applications

This SAE recommended practice defines a recommended practice for implementing a bi-directional, serial communication link among modules containing microcomputers. This document defines those parameters of the serial link that relate primarily to hardware and basic software compatibility such as interface requirements, system protocol, and message format. The actual data to be transmitted by particular modules, which is an important aspect of communications compatibility, is not specified in this document. These and other details of communications link implementation and use should be specified in the separate application documents referenced in Section 2.

SAE J1708

Location Referencing Message Specification

The LRMS is intended to provide a practical approach to standardization for location referencing within a mixed data set environment, i.e., where more than one kind of spatial data set exists, and where spatial references between these data sets must be made. Although some ITS applications in local areas may be satisfied by having one common data set–for which location references may be implemented in any number of ways–many ITS applications will have broad interoperability requirements within the nation or a region.

SAE J2374

The Institute of Electrical & Electronics Engineers, Inc. (IEEE)

Standard for Message Sets for Vehicle/Roadside Communications

Those characteristics of a dedicated short-range communications (DSRC) system that are independent of the Physical and Data Link Layers (ISO model Layers 1 and 2) are specified. The required and optional features of the roadside equipment (RSE) and the onboard equipment (OBE) are specified. In addition, the Applications Layer (ISO model Layer 7) services and protocols, the RSE resource manager, the corresponding OBE command interpreter, and the application-specific messages are all specified. Standard supports and guidelines are provided for implementing secure DSRC systems.

IEEE 1455

Standard for Message Set Template for Intelligent Transportation Systems

The expanding use of digital communications among subsystems of the transportation infrastructure has spawned the development of message sets for the communications between these subsystems. A format for Intelligent Transportation System (ITS) message sets, including common terms (e.g., object identifier), as well as attributes necessary to document ITS data messages, is addressed in this standard.

IEEE 1488

Standard for Data Dictionaries for Intelligent Transportation Systems - Part 1: Functional Area Data Dictionaries

The expanding use of digital communications among subsystems of the transportation infrastructure has spawned the development of data dictionaries for the communications between these subsystems. A format for Intelligent Transportation System (ITS) data dictionaries, including common terms (e.g., time, date, location), as well as meta-attributes necessary to document ITS data concepts is addressed in this standard.

IEEE 1489

Standard for Common Incident Management Message Sets for Use by Emergency Management Centers

This standard addresses the exchange of vital data about transportation-related incidents among emergency management centers through common incident management message sets. Message sets specified are consistent with the National Intelligent Transportation Systems Architecture and are described using Abstract Syntax Notation One syntax. This standard comprises the base standard of a family of incident management standards; specific incident management message sets for traffic, public safety, and HAZMAT centers may be found in forthcoming companion volumes which build upon and augment this base standard.

IEEE 1512

Standard for Hazardous Material Incident Management Message Sets for Use by Emergency Management Centers

This standard addresses the exchange of vital data about hazardous material and other cargo and contents of vehicles and buildings involved in transportation-related events, through common incident management message sets. That data exchange is specifically to support real-time interagency transportation-related incident management. Message sets specified are consistent with the National Intelligent Transportation Systems Architecture and are described using Abstract Syntax Notation One (“ASN.1”) syntax.

IEEE 1512.3

Code of Federal Regulations (CFR)

From the Office of the Federal Register. Global stocks the complete multi-volume collection of the CFR and Index. The Code of Federal Regulations is a codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government of the United States. It is divided into 50 titles which represent broad areas of subject to Federal regulations. Subjects include: Energy, Commerce and Foreign Trade, Customs Duties, Food and Drug, Foreign Relations, Labor, Protection of Environments, Telecommunication, and Transportation.

Code of Federal Regulations

Code of Federal Regulation (CFR) Complete Set
CFR SET

General Provisions
1-2 CFR

The President
3 CFR

Accounts
4 CFR

Administrative Personnel
5 CFR 1-699
5 CFR 700-1199
5 CFR 1200-END

Agriculture
7 CFR 1-26
7 CFR 27-52
7 CFR 53-209
7 CFR 210-299
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7 CFR 1600-1899
7 CFR 1900-1939
7 CFR 1940-1949
7 CFR 1950-1999
7 CFR 2000-END

Aliens and Nationality
8 CFR

Animals and Animal Products
9 CFR 1-199

Energy
Composed of four volumes, these volumes are arranged in the following order: parts 1-50, 51-199, 200-499 and part 500-End. The first and second volumes containing parts 1-199 are comprised of chapter I - Nuclear Regulatory Commission. The third and fourth volumes containing part 200-End are comprised of chapters II, III, and X - Department of Energy and chapter XVII - Defense Nuclear Facilities Safety Board.
10 CFR 1-50
10 CFR 51-199
10 CFR 200-499
10 CFR 500-END

Federal Elections
The contents of this volume represent all current regulations issued by the Federal Election Commission.
11 CFR

Banks and Banking
12 CFR 1-199
12 CFR 200-219
12 CFR 220-299
12 CFR 300-499
12 CFR 500-599
12 CFR 600-END

Business Credit and Assistance
13 CFR

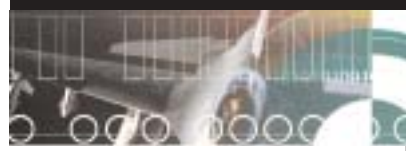
Aeronautics and Space
Composed of 5 volumes, these volumes are arranged in the following order: parts 1-59, 60-139, 140-199, 200-1199, and part 1200-End. The first three volumes containing parts 1-199 are comprised of chapter I - Federal Aviation Administration, Department of Transportation (DOT). The forth volume containing parts 200-1199 is comprised of chapter II - Office of the Secretary, DOT (Aviation Proceedings) and chapter III - Commercial Space Transportation, Federal Aviation Administration, DOT. The fifth volume containing part 1200-End is comprised of chapter V - National Aeronautics and Space Administration and chapter VI - Air Transportation System Stabilization.
14 CFR 1-59
14 CFR 60-139
14 CFR 200-1199
14 CFR 1200-END

Commerce and Foreign Trade
The Secretary of Commerce acting through the Director of the National Institute of Standards and Technology (NIST) implemented the Fastener Quality Act (the Act). The Act protects the public safety by: requiring that certain fasteners which are sold in commerce conform to the specifications to which they are represented to be manufactured; providing for accreditation of laboratories engaged in fastener testing; requiring inspection, testing; and certification in accordance with standardized methods of fasteners covered by the Act. The regulation also establishes, within the patent and Trademark Office (PTO), a recordation to identify the manufacturers or distributors of covered fasteners to ensure that the fasteners may be traced to their manufactuters or private label distributors. In addition, the regulations contain provisions on enforcement, civil penalties, and hearing and appeal procedures.
15 CFR 0-299
15 CFR 300-799
15 CFR 800-END

Commercial Practices
Composed of 2 volumes. The first volume contains parts 0-999 and comprises chapter I - Federal Trade Commission. The second volume containing part 1000 to End comprises chapter II - Consumer Product Safety Commission.
16 CFR 0-999
16 CFR 1000-END

Commodity and Securities Exchanges
17 CFR 1-199
17 CFR 200-239
17 CFR 240-END

Conservation of Power and Water Resources
18 CFR 1-399
18 CFR 400-END



Customs Duties
19 CFR 1-140
19 CFR 141-199
19 CFR 200-END

Employees' Benefits
20 CFR 1-399
20 CFR 400-499
20 CFR 500-END

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Food and Drugs
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21 CFR 1-99
21 CFR 100-169
21 CFR 170-199
21 CFR 200-299
21 CFR 300-499
21 CFR 500-599
21 CFR 600-799
21 CFR 800-1299

Foreign Relations
22 CFR 1-299
22 CFR 300-END

Highways
23 CFR

Housing and Urban Development
24 CFR 0-199
24 CFR 200-499
24 CFR 500-699
24 CFR 700-1699

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25 CFR

Internal Revenue
26 CFR 1.0-1-1.60
26 CFR 1.61-1.169
26 CFR 1.170-1.300
26 CFR 1.301-1.400
26 CFR 1.401-1.440
26 CFR 1.441-1.500
26 CFR 1.501-1.640
26 CFR 1.641-1.850
26 CFR 1.851-1.907
26 CFR 1.908-1.1000
26 CFR 2-29
26 CFR 30-39
26 CFR 40-49
26 CFR 50-299
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26 CFR 500-599
26 CFR 600-END

Alcohol, Tobacco Products and Firearms
27 CFR 1-199
27 CFR 200-END

Judicial Administration
28 CFR 0-42
28 CFR 43-END

Labor
29 CFR 0-99
29 CFR 100-499
29 CFR 500-899
29 CFR 900-1899
29 CFR 1900-1910
29 CFR 1910
29 CFR 1911-1925
29 CFR 1926
29 CFR 1927-END

Mineral Resources
30 CFR 1-199
30 CFR 200-699
30 CFR 700-END

Money and Finance: Treasury
31 CFR 0-199
31 CFR 200-END

National Defense
32 CFR 1-190
32 CFR 191-399
32 CFR 400-629
32 CFR 630-699
32 CFR 700-799
32 CFR 800-END

Navigation and Navigable Waters
33 CFR 1-124
33 CFR 125-199
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34 CFR 1-299
34 CFR 300-399

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34 CFR 400-END

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35 CFR

Parks, Forest, and Public Property
36 CFR 1-199
36 CFR 200-299
36 CFR 300-END

Patents, Trademarks, and Copyrights
37 CFR

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38 CFR 0-17
38 CFR 18-END

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39 CFR

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40 CFR 1-49
40 CFR 50-51
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40 CFR 52.1019-END
40 CFR 53-59
40 CFR 60.1-END
40 CFR 60 APPENDIX
40 CFR 61-62
40 CFR 63.1-63.599
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40 CFR 86.600-END
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46 CFR 200-499
46 CFR 500-END

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48 CFR CHAP 1 P52-99
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48 CFR CHAP 3-6
48 CFR CHAP 7-14
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48 CFR CHAP 29-END

Transportation
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49 CFR 1000-1199
49 CFR 1200-END

Wildlife and Fisheries
50 CFR 1-199
50 CFR 200-599
50 CFR 600-END

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Code of Federal Regulations (CFR)

Food and Drugs
21 CFR 800-1299

Labor
(1910.1000-End)
29 CFR 1910

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QPL INDEX

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Save hours of valuable time searching for critical information. The QPL is a comprehensive directory to the sources of military products requiring qualification by test. With the QPL you have quick and easy access to the most commonly requested qualified military parts and their sources. The QPL includes: Compiled major military specifications complete with description, QPL designations and approved manufacturers from Federal Supply Classification Groups 16, 31,53, 59, 60, 61, 62, 66, 68, 80, and 91. CAGE Code numbers of manufacturers referenced. Defense Supply Center Columbus-Military Drawings (DCSS-DWG) and Standardized Microcircuit Drawings (SMD). Manufacturers' headquarters, regional plants, telephone numbers, and former names, when applicable.

QPL

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The Source of Supply (SOS) is a fully illustrated source and selection directory to thousands of hardware components and their suppliers. Let the SOS do the research work for you. The SOS provides the critical information you need to evaluate, compare, and select the hardware components from manufacturing sources, all in one easy-to-use volume. Sections include: AN, MS, NAS, and NASM components organized by part number and part name, listed by size ranges, product materials, and procurement specifications when applicable. The SOS includes: Comprehensive listings of Military Drawings (DSCC), Microcircuit Drawings (SMD), and SAE International (SAE) Standards, which include identified sources for SAE parts and materials. Metric standards, including identified sources for metric parts and materials. Fastener Quality Act (FQA) accreditation bodies and accredited fasteners and metals laboratories listings. Comprehensive lists of manufacturers and distributors, including address, telephone number, fax number and e-mail address.

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Lists all documents canceled from 1964 through the date of the current release.

DODISS P4

Aviation/Aerospace

USAF Stability and Control DATCOM

The original 4-volume hardcopy manual that provides a systematic summary of methods for estimating basic stability and control derivatives

DATCOM

Wire Rope, Flexible, for Aircraft Control

This specification covers the requirements for carbon steel and corrosion resistant steel aircraft control flexible wire rope. Type I wire rope will be capable of operation within a -65°F to +250°F (-54°C to +121°C) temperature range in wind, dust, fuel, and oil spills, in wash-down and other environmental stresses and aircraft experiences. Type II wire rope will be capable of operation within a -65°F to +200°F (-54°C to +94°C) temperature range in wind, dust, fuel, and oil spills, in wash-down and other environmental stresses and aircraft experiences.

MIL-DTL-83420

Metallic Materials and Elements for Aerospace Vehicle Structures

This Handbook is primarily intended to provide a source of design mechanical and physical properties, and joint allowable. Material property and joint data obtained from tests by material and fastener producers, government agencies, and members of the airframe industry are submitted to MIL-HDBK-5 for review and analysis. (Also available on CD-ROM)

MIL-HDBK-5

Coating: Polyurethane, Aircraft and Support Equipment

This specification covers the requirements for polyurethane coating with maximum volatile organic compounds (VOC).

MIL-PRF-85285

Aircraft, Electric Power, and Characteristics

The purpose of this standard is to ensure compatibility between the aircraft electric system, external power, and airborne utilization equipment. It also establishes the areas of responsibility for aircraft electric system performance.

MIL-STD-704

Construction

Design Guidelines for Physical Security of Facilities

This handbook is to be used during the engineering design of Department of Defense (DoD) facilities to assure appropriate physical security is included. The guidelines are based upon the best currently available research and test data, and will be revised or expanded as additional research results become available. The contents include procedures for planning and designing an integrated physical security system for new facilities as well as the retrofit of existing facilities.

MIL-HDBK-1013/1

Design Guidelines for Security Fencing, Gated, Barriers, and Guard Facilities

This military handbook provides guidance and detailed criteria for the design, selection, and installation of new security fencing, gates, barriers, and guard facilities for perimeter boundaries of Navy and Marine Corps installations or separate activities, and designated restricted areas. Primarily, the criteria herein is based on the following Chief of Naval Operations Instructions (OPNAVINSTs).

MIL-HDBK-1013/10

Logistics Management Information

This specification contains requirements, which are applicable to the acquisition of military systems and equipment. The acquisition logistics management information should be in sufficient detail to allow for program decision making, assessing program status, planning, and ultimately item sustainment. The detail required of this information should be based on program specifics such as, but not limited to, life cycle phase, type of program, hardware complexity, operations and support concept, and degree of program control.

MIL-PRF-49506

Electronics/Electrical

Reliability Prediction of Electronic Equipment

The purpose of this handbook is to establish and maintain consistent and uniform methods for estimating the inherent reliability (Le. the reliability of amature design) of military electronic equipment and systems.

DATCOM

Grounding, Bonding, and Shielding for Electronic Equipments and Facilities Basic Theory

This is a two-volume series which sets forth the grounding, bonding, and shielding theory for communications electronics (C-E) equipment's and facilities.

MIL-HDBK-419

General Guidelines for Electronic Equipment

This handbook provides guidance and lessons learned in the selection of documentation for the design of electronic equipment.

MIL-HDBK-454

Hybrid Microcircuits, General Specification for

This specification establishes the general performance requirements for hybrid microcircuits, Multi-Chip Modules (MCM) and similar devices and the verification requirements for ensuring that these devices meet the applicable performance requirements. Verification is accomplished through the use of one of two quality programs

MIL-PRF-38534

Test Method Standard Electronic and Electrical Component Parts

This standard establishes uniform methods for testing electronic and electrical component parts, including basic environmental tests to determine resistance to deleterious effects of natural elements and conditions surrounding military operations, and physical and electrical tests.

MIL-STD-202

Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment

This standard establishes interface and associated verification requirements for the control of the electromagnetic interference (emission and susceptibility) characteristics of electronic, electrical, and electromechanical equipment and subsystems designed or procured for use by activities and agencies of the Department of Defense.

MIL-STD-461

Test Method Standard for Semiconductor Devices

This standard establishes uniform methods for testing semiconductor devices, including basic environmental tests to determine resistance to deleterious effects of natural elements and conditions surrounding military operations, and physical and electrical tests.

MIL-STD-750

Test Method Standard Microcircuits

This standard establishes uniform methods, controls, and procedures for testing microelectronic devices suitable for use within Military and Aerospace electronic systems.

MIL-STD-883

Engineering & Testing

Reliability Test Methods, Plans, and Environments for Engineering Development, Qualification, and Production

This handbook provides test methods, test plans, and test environmental profiles which can be used in reliability testing during the development, qualification, and production of systems and equipment.

MIL-HDBK-781

Environmental Engineering Considerations and Laboratory Tests

This standard contains materiel acquisition program planning and engineering direction for considering the influences that environmental stresses have on materiel throughout all phases of its service life.

MIL-STD-810

System Safety Program Requirements

This document outlines a standard practice for conducting system safety

MIL-STD-882

Department of Defense Design Criteria Standard Human Engineering

This standard establishes general human engineering design criteria for military systems, subsystems, equipment and facilities.

MIL-STD-1472

DoD Preferred Methods for Acceptance of Product

The purpose of this standard is to encourage defense contractors and other commercial organizations supplying goods and services to the U.S. Government to submit efficient and effective process control (prevention) procedures in place of prescribed sampling requirements.

MIL-STD-1916

Metals & Welding

Anodic Coatings for Aluminum and Aluminum Alloys

This specification covers the requirements for six types and two classes of electrolytically formed anodic coatings on aluminum and aluminum alloys for non-architectural applications.

MIL-A-8625

Chemical Conversion Coatings on Aluminum and Aluminum Alloys.

This specification covers the requirements for two classes of chemical conversion coatings formed by the reaction of chemical conversion materials and the surfaces of aluminum and aluminum alloys. This specification is intended specifically to provide components of military weapon systems with maximum corrosion resistance.

MIL-C-5541

Coating, Oxide, Black, for Ferrous Metal

This specification covers black oxide coatings applied to ferrous metals (wrought iron, carbon, low alloy, and corrosion resistant steels).

MIL-DTL-13924

Inspection, Liquid Penetrant and Magnetic Particle, Soundness Requirements for Materials, Parts and Weldments

This standard describes the discontinuity limits allowed under four quality level classifications for penetrant inspection and three quality level classifications for magnetic particle inspection. The materials may be forgings, castings, tubes, sheets, bars, etc. Fabrication stages may be machined, unmachined, welded, or unwelded parts/materials.

MIL-STD-1907

Requirements for Fabrication Welding and Inspection, and Casting Inspection and Repair for Machinery, Piping and Pressure Vessels

This document contains the welding and allied processes (except brazing) and casting requirements including inspection for the fabrication, alteration, or repair of any item or component of machinery, piping, and pressure vessels in ships of the United States Navy.

NAVSEA S9074-AR-GIB-010

Requirements for Welding and Brazing Procedure and Performance Qualification

This document contains the requirements for the qualification of welding and brazing procedures, welders, welding operators, brazers and brazing operators that must be met prior to any production fabrication. It includes manual, semiautomatic, automatic and machine welding and brazing of ferrous, nonferrous, and dissimilar metals. The qualification tests required by this document are devised to demonstrate the adequacy of the welding or brazing procedures and to demonstrate the ability of welders, brazers, welding operators and brazing operators to produce sound welds or brazes.

NAVSEA S9074-AQ-GIB-010

Requirements for Nondestructive Testing Methods

This document covers nondestructive testing method requirements for radiographic, magnetic particle, liquid penetrant, ultrasonic, eddy current and visual inspections. These requirements are designed to endure the integrity and reliability of inspections performed. This document does not contain acceptance criteria for the inspection methods defined.

NAVSEA T9074-AS-GIB-010

Packaging & Marking

Bags, Heat-Sealable

This document covers heat-sealable bags used in military preservation. The bags covered by this specification are intended for use in specialized military methods of preservation.

MIL-DTL-117

Barrier Materials, Watervaporproof, Greaseproof, Flexible, Heat-Sealable

This specification establishes the requirements for heat-sealable, greaseproof, flexible barrier material having low water vapor transmission characteristics for use in military packaging

MIL-PRF-131

Corrosion Preventive Compound, Solvent Cutback, Cold-Application

This specification covers solvent-dispersed corrosion preventive compounds that deposit thin, easily removable films after evaporation of solvent.

MIL-PRF-16173

Barrier Materials, Flexible, Electrostatic Protective, Heat-Sealable

This specification establishes the requirements for heat-sealable, electrostatic protective, flexible barrier materials used for the military packaging of microcircuits, sensitive semiconductor devices, sensitive resistors, and associated higher assemblies. In addition, the type I materials provide for watervaporproof protection and attenuation of electromagnetic radiation.

MIL-PRF-81705

Department of Defense Standard Practice Military Marking for Shipment and Storage

This standard provides the minimum requirements for uniform military marking for shipment and storage. Additional markings may be required by the contract or the cognizant activity.

MIL-STD-129

Identification Marking of US Military Property

This standard provides the item marking requirements and methods for identification of items of military property produced, stocked, stored, and issued by or for the Department of Defense.

MIL-STD-130

Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices) (Metric)

This standard defines the performance requirements for an ESD control program for electrical and electronic parts, assemblies, and equipment, susceptible to damage from ESD. Electrically initiated explosive devices and part level design are excluded from these requirements.

MIL-STD-1686

Standard Practice for Military Packaging

This document outlines standard processes for the development and documentation of military packaging, as distinct from commercial packaging. decision chart is included for determining the applicability of commercial or military packaging practices

MIL-STD-2073-1

Test Procedures for Packaging Materials

This document provides a centralized listing of detailed and uniform test methods that have been developed to evaluate relevant properties of materials used in military packaging applications. These standardized test methods may be referenced by number in specific packaging material specifications, as applicable, thus eliminating the need to repetitively detail the standard test method in each material specification.

MIL-STD-3010

MS/AN/AND Standards Drawings

Complete Set of MS/AN/AND Standard Drawings with Index

The MS Drawings Set is the single most useful source of standards drawings information for those who design, construct, procure, or maintain equipment for military applications. The MS Set is a collection of nearly 7,000 current U.S. Military Standard (MS), Air Force-Navy Aeronautical Standard (AN), and Air Force-Navy Design Standard (AND) drawings. The MS Set covers every aspect of hardware, components and fittings in a multitude of applications.

MS SET
MS SET RENEWAL

MS Drawings Index - Index to AN, AND and MS Drawings Standards

Organized into Inch and Metric sections, each containing numeric listings by document number and alphabetic listings by title. Includes number, title, revision level, date, and reaffirmation date if applicable. Updated quarterly.

MS INDEX

Military Standards (MS) Drawings are also available for individual purchases.

Federal Standards and Specifications

Panels, Wood/Wood Based; Construction and Decorative

This commercial item description covers generic wood and wood based panel products.

A-A-55057

Ink, Marking, Epoxy Base

This commercial item description covers a catalyzed epoxy system of marking inks for metallic or other non-porous surfaces and printed wiring boards.

A-A-56032

Screw Thread Standards for Federal Services

This compilation provides the basic H28 standard, plus its 24 detailed sub-standards, The H28 standard provides the basic screw thread dimensional and acceptability requirements for common screw thread forms and applications. Design and use information is also provided when necessary. The detailed sub-standard sections provide the specific requirements for particular screw threads, gages, etc. This comprehensive source contains the complete collection at substantially less than the cost of individual documents. One volume set includes binder.

Compiled by Global Engineering Documents

FED-STD-H28 Set

Marking for Shipment (Civilian Agencies)

This document establishes requirements for marking unit, intermediate and transport packages, and unit loads. A transport package (i.e., shipping or exterior container) is one intended for the transportation and handling of one or more articles, smaller packages, or bulk material. A unit load is one or more transport packages held together by means such as a pallet, slip sheet, strapping, or stretch wrap, making them suitable for transport, stacking, and storage as a unit.

FED-STD-123

Paint, Varnish, Lacquer and Related Materials: Methods of Inspection, Sampling and Testing

This standard elaborates the methods used to determine the physical and chemical properties of paint, varnish, lacquer, and related materials. The purpose of this standard is to establish standardized testing methodologies and to eliminate unnecessary or undesirable variations in test results when evaluating a product's adherence to specification requirements.

FED-STD-141

Colors used in Government Procurement

Includes the hardcopy standard and color samples. This standard presents the colors used by Government Activities in a format suitable for color selection, color matching and for quality control inspection. This document describes the designation and use of the color chips of this standard. For reference purposes, each color is reproduced herein as a 1/2 by 1-inch sample.

FED-STD-595 V1

Colors used in Government Procurement (3x5 chips)

The official set of 3 x 5 cards. Each set contains 3 x 5 inch color chips, each in its own protective envelope and are suitable for color matching and quality control inspection purposes

FED-STD-595 FAN DECK

Colors used in Government Procurement (Fan Deck)

A fan deck of colors used in Government Procurement, which is suitable for color identification and selection.

NTCIP 1406

American Softwood Lumber Standard

This Product Standard covers the principal trade classifications and sizes of softwood lumber for yard, structural, and shop use. It provides a common basis of understanding for the classification, measurement, grading, and grade marking of rough and dressed sizes of lumber items

NBS PS 20

Chemical Conversion Coatings and Pretreatments for Ferrous Surfaces (Base for Organic Coatings)

This specification covers cleaning, surface conditioning for crystal refinement and pretreatment by chemical conversion of ferrous metals and zinc/zinc alloy coated metals.

TT-C-490

Inspection Material, Penetrant
Qualified Products List of Product Qualified under SAE Aerospace Material Specifications AMS 2644.
QPL-SAE-AMS-2644

Cancelled & Superceded Military and Federal Specifications

Textile Test Methods
FED-STD-191A NOT 1, dated 21 June 1990, is inactive for new design. This standard describes the general physical, chemical and biological methods for testing textile fibers, yarn, thread, rope, other cordage, cloth and fabricated textile products for conformance with the requirements of Federal and Military Specifications.
FED-STD-191

Department of Defense Standard Practice for Engineering Drawings
MIL-STD-100G, dated 9 June 1997 is canceled. Refer to: ASME Y14.100, ASME Y14.24, ASME Y14.34M, and ASME Y14.35M. This standard establishes the essential requirements and reference documents applicable to the preparation and revision of engineering drawings and associated lists for or by Departments and Agencies of the Department of Defense.
MIL-STD-100

Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-105E, dated 10 May 1989, is canceled without replacement. Refer to MIL-STD-1916. This publication establishes lot or batch sampling plans and procedures for inspection by attributes.
MIL-STD-105

Gauge Inspection
MIL-STD-120, dated 12 December 1950, is canceled without replacement. This standard is to provide correlated technical information applicable to the inspection of gages, special tools, and measuring devices.
MIL-STD-120

Configuration Management
MIL-STD-973, dated 17 April 1992, and INTERIM NOTICE 3, dated 13 January 1995, are canceled without replacement. This standard defines configuration management requirements, which are to be selectively applied, as required, throughout the life cycle of any configuration item (CI).
MIL-STD-973

Inspection System Requirements
MIL-I-45208A, dated 16 December 1963, and AMENDMENT 1, dated 24 July 1981, are canceled without replacement. This specification establishes requirements for contractors' inspection systems. These requirements pertain to the inspections and tests necessary to substantiate product conformance to drawings, specifications and contract requirements and to all inspections and tests required by the contract.
MIL-I-45208

Calibration Systems Requirements
MIL-STD-45662A, is cancelled and superceded by ANSI Z540.1 & ISO 10012-1. This MIL-STD provides requirements for the establishment and maintenance of a calibration system to control the accuracy of measuring and test equipment (M&TE) and measurement standards used to assure that supplies and services delivered to the Government comply with prescribed technical requirements.
MIL-STD-45662

Federal Acquisition Regulations

The Federal Acquisition Regulations (FAR) is the primary tool used by federal agenices in the purchase of supplies and services. It provides a detailed explanation of the proceurement system, policies, procedures, and sample forms in use.

Federal Acquisition Regulations
FAR

Please call for details on supplements to the FAR issued by various government agencies.

Renewal of Federal Acquisition Regulations Update Service
FAR RENEWAL

Air Force Materiel Command Federal Acquisition Regulation Supplement (AFMCFARS)
FAR AFMC SUPP

Department of Defense Supplement to the FAR
Two volumes, includes ring binders.
FAR DOD SUPP

North Altlantic Treaty Organization (NAT0)

Allied Environmental Conditions and Test Publications

Environmental Conditions
Provides characteristics and data on environmental conditions for operational events and scenarios that influence the design of defense materiel. Although it is not practicable to provide data to cover all circumstances, AECTP 200 is considered to include the most relevant environmental conditions.
AECTP 200

Climatic Environmental Tests
To be used for testing and evaluating the resistance and/or performance of materiel to the effects of natural and induced climatic environments that may be encountered in its service life.
AECTP 300

Mechanical Environmental Tests
Test Methods address mechanical environments, both individually and when combined with other environments, such as climatic environments included in AECTP 300. The application of combined environments is relevant and often necessary where failures could be expected from potential synergistic effects.
AECTP 400

Standardization Agreement (STANAG)

Extreme Climatic Conditions and Derived Conditions for Use in Defining Design/Test Criteria for NATO Forces Material
To describe the principal climatic factors which constitute the distinctive climatic environments found throughout the world, excluding Antarctica. To describe the principal climatic factors, which constitute the distinctive climatic environments found throughout the world, excluding Antarctica.
STANAG 2895

Analogue Video Standard for Aircraft System Applications
This STANAG defines the requirements for the distribution system characteristics of analogue raster composite video systems and includes definitions of video line standards, distribution and video source and sink interfaces together with Annex C defining colour. It applies to all aircraft system installations for generation, processing, distribution and reception of the defined raster formats.
STANAG 3350

Technical Characteristics of IFF MK XA and MK XII Interrogators and Transponders - Part IV: Technical Characteristics of Mode S in Military Interrogators and Transponders
STANAG 4193 P4

Policy for Introduction, Assessment and Testing for Insensitive Munitions (MURAT) Policy for Introduction, Assessment and Testing for Insensitive Munitions (MURAT)
The aim of this agreement is to establish a standardized policy for the development, assessment and testing of Insensitive Munitions (MURAT).
STANAG 4439

Protection Levels for Occupants of Logistic and Light Armoured Vehicles Protection Levels for Occupants of Logistic and Light Armoured Vehicles
The aim of this Agreement is to standardise protection levels for logistic light armoured vehicle occupants.
STANAG 4569

National Aerospace Standards (NAS)

An extensive collection that provides nearly 3,000 aerospace standards for components, design and process specifications aircraft, spacecraft, major weapon systems and all types of ground and airborne electronic systems. The NAS Set contains procurement documents for parts and components of high technology systems including fasteners, high pressure hoses, fittings, high density electrical connectors, and bearings. Major components, design standards and process specifications are defined right down to the finished product. Heavily illustrated and includes parts numbers.

Complete Set of NAS Standards
Eleven-Volume Set, Includes NAS Index, and includes update service for first year.
NAS SET

Renewal for NAS Set
Update service after first year.
NAS SET RENEWAL

Index to National Aerospace Standards
Organized into Inch and Metric sections, each section contains numeric listings by document number and alphabetic listings by title. Document listings include number, title, revision level, date, and reaffirmation date if applicable.
NAS INDEX

Complete Set of Metric Standards
Contains NA, NAM & DS Documents.
NAS METRIC SET

Renewal for NAS Metric Set
Update service after first year.
NAS METRIC SET RENEWAL

AIA - Aerospace Industries Association of America - Includes National Aerospace Standards on CD-ROM or Internet
Includes update service.
Call for quote
IHS ES340
SOS

Parachute Industry Association (PIA)

The PIA actively pursues many technical, safety, and promotional projects that benefit its members and the industry it serves. Global is the worldwide distributor of PIA Standards. These standards are available in hardcopy and electronic media formats, including Internet delivery.

Cloth, Duck, Nylon
This specification covers the requirements for nylon cloth woven of plied yarns, for use in the manufacture of parachute packs and other military items.
PIA-C-7219

Cord, Nylon, Coreless - Renamed from MIL-C-7515F 27 June 1988
This document covers braided nylon coreless cord.
PIA-C-7515

Hardware, Parachute, General Specification for - Renamed from MIL-H-7195G(GL) 07 October 1991 A
This specification covers the general requirements for all types of parachute hardware.
PIA-H-7195

Verification Testing of Parachute Textile Materials to all Holders of MIL-STD-1525A (USAF) - Renamed and Superseding MIL-STD-1525A 13 September 1974
This standard establishes the verification tests for parachute materials (subcontracted supplies) used in the fabrication of parachutes.
PIA-STD-1525

Webbing, Textile, Cotton Warp
This document covers materials and construction of various types of cotton and cotton-nylon webbing woven on both shuttle and shuttleless looms.
PIA-W-5665

Webbing, Textile, Woven Nylon Impregnated - Renamed from MIL-W-27265E 27 June 1988
This document covers resin or latex impregnated woven nylon textile webbing.
PIA-W-27265

Quality Control Systems and Services, Inc. (QCSS)

QCSS Handbooks

Specifications for the Aerospace/Electronic and Machine-Job-Shop-Industries
One volume, includes ring binder.
QCSS HDBK V1

Packaging Requirements
One volume, includes ring binder.
QCSS HDBK V2

Plating Processes
One volume, includes ring binder.
QCSS HDBK V3

Chemical Composition and Mechanical Properties of Aluminum, Brass, and Copper
One volume, includes ring binder.
QCSS HDBK V4

Chemical Composition and Mechanical Properties of Steel, Nickel-Chrome Alloys, Titanium, Zinc-Lead-Magnesium, Sintered Metals, Bearing, and Metal Test Standards
One volume, includes ring binder.
QCSS HDBK V4A

Plastics Materials
One volume, includes ring binder.
QCSS HDBK V4B

Configuration Control
One volume, includes ring binder.
QCSS HDBK V5

Soldering
One volume, includes ring binder.
QCSS HDBK V6

Printed Wiring
One volume, includes ring binder.
QCSS HDBK V7

Test Methods-Standard General Requirements and ESDC Requirements
One volume, includes ring binder.
QCSS HDBK V8

Test Methods and Procedures
One volume, includes ring binder.
QCSS HDBK V9

Microcircuits
One volume, includes ring binder.
QCSS HDBK V10

Reliability
One volume, includes ring binder.
QCSS HDBK V11

Wire, Cable and Harness Assembly
One volume, includes ring binder.
QCSS HDBK V12

Fiber Optics
One volume, includes ring binder.
QCSS HDBK V13

American Welding Society (AWS)

AWS is recognized worldwide as the impartial forum for the development of consensus-based American National Standards. Over 170 standards - as codes, recommended practices, guides, and specifications - are led by AWS' flagship standard, the Structural Welding Code - Steel. Global Engineering Documents®, is the exclusive worldwide distributor of AWS Standards and Publications.

Join a worldwide membership to receive discounts, information, and opportunities that enhance your career and cultivate professional relationships. One year membership dues, that include a 25% discount on AWS publications, One year subscription to the Welding Journal magazine, and many other benefits.
AWS MEMBERSHIP

American Welding Society (AWS)

Structural Welding Code - Steel
The world's best reference for structural steel welding. New material includes both U.S. and metric measurements; new section on responsibilities of personnel; revised design of welded connections; limits of fillet weld length; definition of T-joints, and fatigue limits of weld and joint types; new data on through-thickness base metal loading; clarification on matching filler metals to construction materials; and guidelines for Charpy V-notch testing, and commentary on ultrasonic testing. Engineers, architects and fabricators depend on this book to ensure integrity of welded steel structures. ANSI approved, Dept. of Defense adopted.
AWS D1.1/D1.1M

Structural Welding Code - Reinforcing Steel
Fifth edition covers welding reinforcing steel in most reinforced concrete applications. Includes allowable stresses, inspection, qualification, structural details, joint details, and workmanship requirements. Figures clearly illustrate important welding considerations: unacceptable weld profiles, effective weld sizes, details of joints of anchorages, base plates, and inserts.
AWS D1.4

Structural Welding Code - Stainless Steel
This new code establishes the requirements for welding stainless steel using the gas metal, shielded metal, fluxcored, and submerged arc welding processes, including stud welding. The code covers design, fabrication, qualification, and prequalification of procedures, welding personnel qualification, and inspection. Includes 79 figures, 26 tables, and 12 annexes in 224 softbound pages.
AWS D1.6

The Official Book of D1.1 Interpretations
A collection of responses to formal inquiries about the requirements of D1.1 from 1976 to 1998. An excellent reference for D1 users. 8-1/2in. x 11in., softbound, 40 pages.
AWS D1.1 BI

Standard Symbols for Welding, Brazing, and Nondestructive Examination
As a "language," these symbols are the precise means for designers and detailers to place welding, brazing, and nondestructive examination information on drawings and the most error-free means for welding personnel to adhere to original plans.
AWS A2.4

Standard Welding Terms and Definitions; Including Terms for Adhesive Bonding, Brazing, Soldering, Thermal Cutting, and Thermal Spraying
Terms you will not find in your regular dictionary. "Adequate definition requires there be only one clearly applicable definition. The definition must accurately reflect the term's use in the welding world." Industry correct and nonstandard terms are both included in this 128-page compilation of over 1,200 definitions.
AWS A3.0

Welding Symbols Wall and Desk Charts (Laminated)
Easy-to-read laminated charts, offered as a set of two charts, vividly illustrate proper usage of basic and supplementary welding symbols. Use on your desk, drafting table or in the shop or classroom. Wall Chart is 22in. x 28in. and Desk Chart is 11in. x 17in..
AWS A2.1 WC & DC

API 1104 Code Clinic Reference Manual
Official material used in the AWS field workshop offerings; suitable for in-company training or self-study. Ten chapters, each with self-test.
AWS API-M

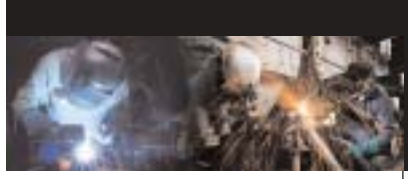
Guide for the Nondestructive Examination of Welds
Tells you which NDE method is best for detecting categories of discontinuities and defects. ANSI Approved.
AWS B1.10

Guide for the Visual Examination of Welds
This AWS guidebook contains 48 photos and figures that sharply focus on the characteristics of porosity, incomplete fusion, undercut, laminations, cracks, spatter, melt-through, and other discontinuities.
AWS B1.11

Certification Manual for Welding Inspectors (AWS CM)
An excellent reference and introduction for those interested in becoming Certified Welding Inspectors. Specifically guides those studying for the CWI examination. New, sleeker style with improved readability. Eleven chapters cover the following topics: the welding inspector; responsibilities; standards; joint geometry and terminology; symbols; weldability; destructive testing; procedure and welder qualification; welding/brazing/cutting processes; discontinuities; NDE; and inspector reports.
AWS CM

Code Clinic; for Study of AWS D 1.1 Structural Welding Code - Steel; Reference Manual
Official material used in the AWS field clinic offerings; suitable for in-company training or self-study. Consists of 9 chapters, each concludes with a self-test, 75 pages.
AWS CC-RM

Visual Inspection Workshop Reference Manual
Official material used in the AWS field workshop offerings; suitable for in-company training or self-study. Five chapters, each with concluding self-tests, approximately 160 pages. 80 graphics overall.
AWS VIW-M



Welding Inspection Handbook (AWS WI)
Not too deep and not too abridged, this edition of the Welding Inspection earns the rank of handbook with its no-nonsense style, clarity of detail, and logical progression of information - with chapters on: operations; inspection, safety; QA; ferrous welding metallurgy; preheating/post weld heat treating; discontinuities; qualification of WPSs; qualification of welders; destructive testing; proof tests; NDE methods; metrics; standards; and symbols.
AWS WI

Welding Inspection Technology Seminar Reference Text (AWS WIT-T)
With 379 figures and photographs (many in full color), this newest Welding Inspection Technology text is more readable, informative and comprehensive than ever before. This is the official AWS textbook for the three-day core seminar for CWI exam preparation, but it's also available for direct purchase for at-home study.
AWS WIT-T

Student Workbook to WIT-T-99
AWS WIT-W

Design and Planning Manual for Cost Effective Welding (AWS DPW)
The manual is meant to serve as a practical guide for engineers, planners, and hands-on professionals to improve scheduling and lessen rework regardless of industry. The 142-page publication is divided into 18 sections including welding cost analysis; modular construction; concepts of welding design; fatigue considerations; joint design; weld distortion and control; information for the welder; NDE; and defects and discontinuities.
AWS DPW

Sheet Metal Welding Code
AWS D9.1M/D9.1

Guide for Steel Hull Welding
AWS D3.5

Recommended Practices for the Brazing of Copper Tubing and Fittings for Medical Gas Systems
AWS D10.13/D10.13M

Welding of Industrial and Mill Cranes and Other Material Handling Equipment
This specification applies to the fabrication, by welding. This extensively illustrated specification applies to the welding of all principal structural weldments and all primary welds used in the manufacture of cranes for industrial, mill, powerhouse, and nuclear facilities. All provisions of this specification are equally applicable to the strengthening and repairing of existing overhead cranes and material-handling equipment as described above. Fifty-two figures, 18 tables amplify 10 sections, including "Repair and Correction of Discontinuities." Three appendices complete this 121-page document. ANSI approved.
AWS D14.1

Specification For Welding Earthmoving and Construction Equipment
AWS D14.3/D14.3M

Railroad Welding Specification - Cars and Locomotives
In order to answer the need for an authoritative source, this specification was produced by all segments of the railroad industry, including both users and suppliers, the general public, and representatives from the Association of American Railroads. Coverage includes welding metal 1/8"+ in thickness, specific requirements for welding railroad cars, and the requirements for the manufacturing and reconditioning of locomotives and passenger train vehicles. Three hundred eighty-six pages with 8 appendices (including base metal groups and filler metal classifications), 41 tables, 22 metric tables, 91 figures, 64 metric figures. Published in 2001. ANSI Approved.
AWS D15.1

Specification for Fusion Welding For Aerospace Applications
Seventy-eight pages, 14 tables, 47 figures, 5 annexes, including "Guidelines for Design, Analysis, and Fabrication of Weld Joints," and Commentary. Metric (SI) equivalents provided. ANSI Approved.
AWS D17.1

Specification for Welding of Austenitic Stainless Steel Tube and Pipe Systems in Sanitary (Hygienic) Applications
This document outlines welding standards for use in the manufacture and construction of dairy and food product processing plants. The committee was formed in response to the request of the 3-A Sanitary Standards Committee, which develops sanitary design standards for dairy and food processing, packaging and handling equipment and systems, 10 pages. ANSI Approved.
AWS D18.1

Guide to Weld Discoloration Levels on Inside of Austenitic Stainless Steel Tube
Laminated sheet with color illustration showing the degrees of coloration on the inside of an austenitic stainless steel tube with increasing amounts of oxygen in the backing shielding gas. Suitable as a specifying tool and a visual inspection guide. ANSI Approved.
AWS D18.2

Safety in Welding and Cutting and Allied Processes (AWS Z49.1)
Unions, societies, trade groups, U.S. military, and U.S. enforcement agencies all contributed to the latest edition of Safety in Welding, Cutting, and Allied Processes-including AWS, Sheet Metal Workers, OSHA, and NIOSH. 52 pages cover oxyfuel gas welding and cutting safety; arc welding and cutting equipment safety; resistance welding safety; electron beam processes; and laser beam cutting; and welding safety. Four appendices.
AWS Z49.1

Fundamentals Welding Metallurgy - Vol.1 (AWS WM1)
Builders, manufacturers, welding shops, colleges, and universities will benefit from this valuable reference book, which places a lifetime of welding research and experience at their fingertips. This is practical insight into the science and technology of metals.
AWS WM1.4

Welding Handbook Volume 1 - Welding Science & Technology (AWS WHB-1.9)
This volume of the Welding Handbook series reflects the latest developments in the field of welding – not only from regenerated processes that have benefitted from the explosions in electronic technology, but to the most current information on robotics and best practices of manual arc welding. Seventeen chapters create a true panorama of the technology that has built the 20th century.
AWS WHB-1.9

Welding Handbook Volume 2 - Welding Processes

Cover the spectrum of welding and cutting processes withthis invaluable resource book. Experts have prepared 29 information-filled chapters on the specific processes. Inaddition, helpful, detailed charts, drawings, and appendices are included to make this handbook a practical and indispensable reference for management, supervisory personnel, educators, welders, researchers, and students.

AWS WHB-2.8

Welding Handbook Volume 2 - Welding Processes - In Spanish

Manual de Soldadura, Vol. 2 in Spanish. Spanish translation of Welding Handbook, 8th Edition, Vol. 2, Welding Processes. Available in U.S. and Canada only.

AWS WHB-2.8 SPANISH

Welding Handbook Volume 3 - Materials and Applications Part 1

This volume covers information on nonferrous metals, plastics, composites, ceramics, and new specialized topics: maintenance and repair, welding and underwater welding, and cutting. This 526-page, hardcover book has ten chapters including safe practices and applications, as well as weldability and applications of specific metals. Colorful figures, easy-to-read tables, and an index of major subjects make this book one of the most practical tools to quickly locate the information you need.

AWS WHB-3.8

American Welding Society (AWS)

Join a worldwide membership to receive discounts, information, and opportunities that enhance your career and cultivate professional relationships. One year membership dues, that include a 25% discount on AWS publications, One year subscription to the Welding Journal magazine, and many other benefits.

AWS MEMBERSHIP

Welding Handbook Volume 4 - Materials and Applications Part 2

Volume 4 contains considerable expansion of information provided in previous editions. This expanded coverage has resulted in the presentation of material never before published by AWS. Like its predecessors, this volume of the Welding Handbook is the ultimate reference tool. Not only does the book come equipped with two separate indexes, but each chapter boasts its own Table of Contents. Packed with more than 500 tables, charts and photos, it will make your research efforts easier than ever. Chapters: Carbon and Low-Alloy Steels; High-Alloy Steels; Coated Steels; Tool and Die Steels; Stainless and Heat-Resisting Steels; Clad and Dissimilar Metals; Surfacing; Cast Irons; Titanium and Titanium Alloys; Reactive, Refractory, and Precious Metals, and Alloys.

AWS WHB-4.8

Everyday Pocket Handbook for Arc Welding Steel

This 3-1/2in. x 6in. handy reference is 34 pages packed with the most useful charts and drawings relevant to arc welding steel. Spiral binding lays flat or props open “tent style” for convenient viewing in any work or study situation. Includes classification, size, amps and deposition rates for selected SMAW, GMAW and FCAW electrodes. Also, weld positions; pipe size and wall thicknesses; basic welding symbols and locations; and guide to electrode conditioning and storage. (Note: Pocket Handbooks must be purchased in quantities of four.)

AWS PHB-1

Everyday Pocket Handbook for Visual Inspection and Weld Discontinuities

Causes and Remedies.

AWS PHB-2

The Everyday Pocket Handbook on Welded Joint Details for Structural Applications

What could be more convenient than a desk chart? How about this spiral bound, fits-in-your-pocket work tool for when you’re away from the office or in the field. Same 20 diagrams of different structural joints with prequalified details from D1.1 as illustrated in SWJ-simply a different format. (Note: Pocket Handbooks must be purchased in quantities of four.)

AWS PHB-3

The Everyday Pocket Handbook for Gas Metal Arc and Flux Cored Arc Welding

GMAW portion includes shielding gas information for both spray arc transfer and short-circuiting arc transfer; globular to spray transition currents; arc voltages; wire-feed speed; melting rates; and typical welding conditions for carbon and low alloy steels, stainless steels, and aluminum. FCAW portion includes specification and classification system for FCAW electrodes, and same topics as GMAW portion for CO2 and self-shielding. Covers troubleshooting advice for mechanical and electrical GMAW and FCAW, 50 pages, 3-1/2in. x 6in., spiral bound. (Note: Pocket Handbooks must be purchased in quantities of four.)

AWS PHB-4

Everyday Pocket Handbook on Metric Practices for the Welding Industry

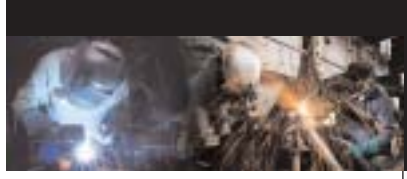
Twenty-two pages, 3-1/2” x 6” spiral bound aid was compiled for on-the-job help. Includes table conversions for common welding terms, length conversions, electrode sizes, fillet weld sizes, welding travel and wire feed speeds, deposition rates and gas flow rates - all in SI and U.S. customary units. (Note: Pocket Handbooks must be purchased in quantities of four.)

AWS PHB-5

Everyday Pocket Handbook for Visual Inspection of Aws D1.1-98 Structural Welding Code Fabrication and Welding Requirements

Long title covers succinct 36-page compilation of excerpts from D1.1-98, but also applicable to subsequent editions. Includes transitions between unequal thickness; access hold requirements; pre-weld joint detail; base material surface and weld profile requirements; and 5 pages of visual acceptance criteria. Useful when actual D1.1 code is too cumbersome for tight, on-the-job areas. (Note: Pocket Handbooks must be purchased in quantities of four.)

AWS PHB-6



The Everyday Pocket Handbook for Shielded Metal Arc Welding

Thirty-four page portable guide emphasizes SMAW electrode care, handling and use. Includes convenient charts on meaning of classification suffix(es), suggested amperage ranges, stub loss, electrode orientation, and suggested joint designs. 3-1/2in. x 6in., spiral bound. (Note: Pocket Handbooks must be purchased inquantities of four.)

AWS PHB-7

The Everyday Pocket Handbook for Gas Metal Arc Welding (GMAW) of Aluminum

Covers preparation of aluminum for welding, tips and troubleshooting, typical procedures for groove and fillet welds in aluminum alloys with argon shielding, aluminum filler metal properties (as-welded condition) and guide to selection of filler metal for general purpose welding. Thirty pages, 3-1/2in. x 6in., spiral bound. (Note: Pocket Handbooks must be purchased in quantities of four.)

AWS PHB-8

Specification for Welding Procedure and Performance Qualification

This universal qualification document is an excellent tool to ensure economical quality. Covers all welding processes and an exhaustive array of materials used in metal fabrication. Indispensable for those who design and manufacture non-code products but who may also be performing to ISO 9000. Experience shows Specification for Welding Procedure and Performance Qualification adapts to the requirements of ISO 9000. Spells out requirements for the qualification of welding procedures and the requirements for the performance qualification of welders and welding operators for manual, semiautomatic, machine, and automatic welding.

AWS B2.1

Brazing Procedure and Performance Qualification

This standard provides the requirements for qualification of brazing procedure specifications, brazers, and brazing operators for manual, mechanized, and automatic brazing. Includes torch, furnace, induction, resistance, dip, and infrared brazing. Base metals, brazing filler metals, brazing fluxes, brazing atmospheres, and brazing joint clearances are also included, 45 pages. ANSI Approved, Department of Defense Adopted.

AWS B2.2

Standard Methods for Mechanical Testing of Welds (US Customary Units)

AWS B4.0

Standard Welding Procedure Specification (SWPS) for; Gas Metal Arc Welding (Short Circuiting Transfer Mode) of Carbon Steel (M-1,Group 1), 18 through 10 Gauge, in the AS-Welded Condition, with or without Backing

Includes Unlimited Intra Company Site License Agreement.

AWS B2.1-1-004

Standard Welding Procedure Specification (SWPS) for; Gas Tungsten Arc Welding of Galvanized Steel (M-1), 18 through 10 Gauge, in the AS-Welded Condition, with or without Backing

Includes unlimited intra company site license agreement.

AWS B2.1-1-007

Standard Welding Procedure Specification (Wps) For; Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 Or 2), 1/8 Through 1-1/2 Inch Thick, E7018, As-Welded or PWHT Condition

Includes unlimited intra company site license agreement.

AWS B2.1-1-016

Standard Welding Procedure Specification(Wps) For; Shielded Metal Arc Welding of Carbon Steel(M-1/P-1/S-1, Group 1 Or 2), 1/8 through 1-1/2 Inch Thick, E6010 (Vertical Uphill) Followed by E7018, As-Welded or PWHT Condition

Includes Unlimited Intra Company Site License Agreement.

AWS B2.1-1-022

Standard Welding Procedure Specification(WPS) for; Shielded Metal Arc Welding of Austenitic Stainless Steel (8/P-8/S-8, Group 1), 1/8 Through 1-1/2 Inch Thick, As-Wleded Condition

AWS B2.1-8-023

Standard Welding Procedure Specification(Wps) for; Gas Tungsten Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/16 Through 1-1/2 Inch Thick, Er3xx, As-Welded Condition, Primarily Plate and Structural Applications

Includes Unlimited Intra Company Site License Agreement.

AWS B2.1-8-024

American Petroleum Institute (API)

Welding Guidelines for the Chemical, Oil, and Gas Industries

This publication offers guidance in the selection of steels for new pressure vessels and in the inspection and operation of existing pressure vessels to minimize the probability of brittle fracture caused by low toughness at temperatures below 120°F.

API RP 582

Safe Welding, Cutting, and Hot Work Practices in the Petroleum and Petrochemical Industries

This publication provides guidelines for the protection of personnel and property when performing welding, cutting, or other hot work in the petroleum and petrochemical industries. This recommended practice distinguishes between normal hot work activities and those, which involve hot work on equipment in service. It provides guidance for certain of these special “in-service” activities.

API RP 2009

Procedures for Welding or hot Tapping on Equipment in Service

This publication is designed to provide a better understanding of the problems and hazards encountered when welding or installing hot tap connections on piping, vessels, or tanks containing flammable or combustible liquids or gases.

API RP 2201

Design & Construction of Large, Welded, Low - Pressure Storage Tanks
Covers the design and construction of large, welded, low-pressure carbon steel aboveground storage tanks (including flat-bottom tanks) that have a single vertical axis of revolution. The tanks described are designed for metal temperatures not greater than 250°F and with pressures in their gas or vapor spaces not more than 15 psig.
API STD 620

Welded Steel Tanks for Oil Storage
Covers material, design, fabrication, erection, and testing requirements for vertical, cylindrical, aboveground, closed-and open-top, welded steel storage tanks in various sizes and capacities for internal pressures approximating atmospheric pressure (internal pressures not exceeding the weight of the roof plates), but a higher internal pressure is permitted when additional requirements are met. This standard applies only to tanks whose entire bottom is uniformly supported and to tanks in non-refrigerated service that have a maximum operating temperature of 200°F.
API STD 650

Welding of Pipelines and Related Facilities
Covers gas and arc welding for the production of high-quality welds in carbon and low-alloy steel piping used in the compression, pumping, and transmission of crude petroleum, petroleum products, and fuel gases where applicable to distribution systems.
API STD 1104

ASME International (ASME)

Power Piping
Prescribes minimum requirements for the design, materials, fabrication, erection, test, and inspection of power and auxiliary service piping systems for electric generation stations, industrial institutional plants, central and district heating plants. Includes Code Case #25.
ASME B31.1

Welded and Seamless Wrought Steel Pipe
ASME B36.10M

Welded Aluminum-Alloy Storage Tanks
ASME B96.1

American Welding Society (AWS)

Bridge Welding Code
This code covers the welding requirements for AASHTO welded highway bridges made from carbon and low-alloy constructional steels. This edition contains dimensions in metric SI Units and U.S. Customary Units. Sections 1 through 7 constitute a body of rules for the regulation of welding and in steel construction. Section 9 of the previous edition has had its provisions distributed throughout this edition. Sections 8, 10, and 11 do not contain provisions, as their analogue D1.1 sections are not applicable to the D1.5 Code. Section 12 contains the requirements for fabricating fracture critical members.
AASHTO/AWS D1.5M/D1.5

ASTM International (ASTM)

Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service
ASTM A 269

Standard Specification for Seamless and Welded Austenitic Stainless Steel Pipes
ASTM A 312/A 312M

Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
ASTM A 500

Method for Radiographic Examination of Weldments
ASTM E 1032

Standard Test Method for Radioscopic Examination of Weldments
ASTM E 1416

Standard Practice for Radiographic Examination
ASTM E 1742

American Welding Society (AWS)

Certification Manual for Welding Inspectors (AWS CM)
An excellent reference and introduction for those interested in becoming Certified Welding Inspectors. Specifically guides those studying for the CWI examination. New, sleeker style with improved readability. Eleven chapters cover the following topics: the welding inspector; responsibilities; standards; joint geometry and terminology; symbols; weldability; destructive testing; procedure and welder qualification; welding/brazing/cutting processes; discontinuities; NDE; and inspector reports.
AWS CM

British Standards Institution (BSI)

Approval Testing of Welders for Fusion Welding - Part 1: Steels
BS EN 287 P1

General Rules For Fusion Welding
BS EN 288 P1

Welding Procedure Tests for the Arc Welding of Steels
BS EN 288 P3

Welded, Brazed and Soldered Joints - Symbolic Representation on Drawings
BS EN 22553

Arc-Welded Joints in Steel - Guidance on Quality Levels for Imperfections
BS EN 25817

American Welding Society (AWS)

Structural Welding Code - Aluminum
This code set the rules and regulations necessary for welding structural aluminum using the gas metal arc, gas tungsten arc, and plasma arc welding processes, as well as stud welding and plasma arc gouging, in dynamically loaded or statically loaded nontubular structures as well as tubular structures. Developed under strict American National Standards Institute rules, Structural Welding Code. Aluminum includes sections on Fabrication, Qualification of WPSs, and Personnel and Inspection.
AWS D1.2/D1.2M

Deutsches Institut fur Normung, e.V. (DIN)

Welded Precision Steel Tubes: Dimensions
DIN 2393 P1

Welded Precision Steel Tubes: Technical Delivery Conditions
DIN 2393 P2

Inspection Documents for Metallic Products
DIN EN 10204

American Welding Society (AWS)

Structural Welding Code - Sheet Steel
One of the primary objectives of this code is to define the allowable capacities used in sheet steel applications in which the transfer of calculated load occurs. If you are responsible for the welding of steel decks, panels, storage racks, and stud and joist framing members, to name a few applications; this code helps you to effect consistently sound welding of joints. Includes allowable load capacities, details of welded connections, pre-qualification of WPSs, qualification, inspection, and stud welding. Seven tables, 44 figures, 5 Annexes, and commentary.
AWS D1.3

Government and Military Documents

Transportation of Natural and Other Gas by Pipeline; Annual Reports, Incident Reports and Safety-Related Condition Reports
Contained in 49 CFR 186 - 199.
49 CFR PT 191

Transportation of Natural and Other Gas by Pipeline; Minimum Federal Safety Standards
Contained in 49 CFR 186 -199.
49 CFR PT 192

Transportation of Hazardous Liquids by Pipeline
Contained in 49 CFR 186 - 199.
49 CFR PT 195

Petroleum Fuel Facilities
MIL-HDBK-1022

Cargo Tank Cleaning
MIL-HDBK-291

Pipe and Pipe Fittings, Glass Fiber Reinforced Plastic, for Liquid Petroleum Lines
MIL-P-29206

Color Code/Pipelines and for Compressed Gas Cylinders
MIL-STD-101

Standards for Maintenance of Fixed Aviation Fuel Receipt, Storage & Dispensing Systems
STANAG 3609

Natural Gas and Liquid Petroleum Piping
NFGS 15195

Cleaning Petroleum Storage Tanks
NFGS-Y-13657

American Welding Society (AWS)

Welding Inspection Handbook (AWS WI)
Not too deep and not too abridged, this edition of the Welding Inspection earns the rank of handbook with its no-nonsense style, clarity of detail, and logical progression of information - with chapters on: operations; inspection, safety; QA; ferrous welding metallurgy; preheating/post weld heat treating; discontinuities; qualification of WPSs; qualification of welders; destructive testing; proof tests; NDE methods; metrics; standards; and symbols.
AWS WI

FREE Catalogs Available From Global

American Gear Manufacturers Association (AGMA) Publications Catalog

This free catalog lists AGMA standards information sheets, gear software, technical meeting papers, books, and other products and services. It is available exclusively from Global Engineering Documents®. Plus, Global can provide you with all specifications, bulletins, and publciations listed within.

American Gear Manufacturers Association Publications Catalog
AGMA INDEX

American Petroleum Institute (API) Publications and Materials Catalog

This free catalog contains detailed information on Petrochemical Standards and Publications available t hrough Global.

American Petroleum Institute Publications and Materials Catalog
API CATALOG

American Petroleum Institute Publications and Materials Catalog on CD-ROM
API CATALOG CD

American Welding Society (AWS) Catalog

This free catalog contains detailed information on welding standards and publications available through Global.

American Welding Society Catalog
AWS INDEX

National Electrical Manufacturers Association (NEMA) Electrical Standards and Product Guide

This free catalog lists National Electrical Manufacturers Association standards and publications available through Global.

National Electrical Manufacturers Association Electrical Standards and Products Guide
NEMA INDEX

Telecommunications Industry Association (TIA) Catalog

Reorganized intro four easy-to-read sections: wiring, wireless, safety/testing, wireline and quality. The telecom catalog is your guide to the most up-to-date information on telecommunications standards, regulations, and publications.

TIA Catalog on CD-ROM
TIA INDEX CD

ASTM International (ASTM)

ASTM STANDARDS

ASTM Standards Source (CD-ROM Format)
The ASTM Standards provide you with many new ASTM petroleum, paint, and plastics standards Includes the entire collection plus quarterly updates.
ASTM STD SOURCE

ASTM Standards Source Set
Entire collection on CD-ROM with no updates.
ASTM STD SOURCE SET

WORLD STEEL STANDARDS

Developed jointly by American Society for Testing and Materials (ASTM) and SAE International (SAE).

Handbook of Comparative World Steel Standards
This helpful handbook lets you compare steel standards from several countries at a glance, including ANSI, ASTM, AS, API, BSI, CSA, DIN, JIS, and ISO. Each standard lists country, standard number and year, grade, chemical composition and mechanical properties. Includes CD-ROM. Second Edition.
ASTM DS 67

UNIFIED NUMBERING SYSTEM

Metals and Alloys in the Unified Numbering System (UNS)
The UNS 9th Edition contains more than 4,600 Metals and Alloy Designations - including 500 New and Revised since the 1993 edition. UNS designations include a description of the material, its chemical composition, and applicable cross-reference specifications from societies, trade associations and government. Each UNS designation consists of a single-letter prefix followed by five digits (for example S17400).
ASTM DS 56
ASTM DS 56 CD

Department of Defense Index of Specifications and Standards (DoDISS)

DoD Index of Specifications and Standards (Alphabetical and Numerical Listing)
Includes update service.
DODISS

Department of Defense Index of Specifications and Standards, Part IV Appendix Numerical Listing
Lists all documents canceled from 1964 through the date of the current release.
DODISS P4

Deutsches Institut fur Normung, e.V. (DIN)

DIN Global Standards Information Index on CD-ROM
This index of standards facilitiates access to international, European and German standards for companies outside Europe. Provides detailed reference data for all valid international, European, German and Japanese standards and draft standards, as well as for a selection of important U.S. standards collections. Comprises more than 100,000 references. Annual subscription. Updated quarterly.
DIN GLOBAL STANDARDS

Dewey Decimal Classification System - 21st Edition (Spanish)

More than 200,000 libraries throughout the world use the Dewey Decimal Classificiation System. This complete manual helps as a guide to work in ambiguous and difficult areas such as how to choose precisely between related numbers. It is a direct and faithful translation of the latest edition in English, but gives you more clarification to the text and makes searches easier. Features of the 21st edition in Spanish include: Expanded index that makes it easier to locate the subjects, Additional summaries to help you find principal subdivisions, Additional notes, for better clarification of the schematics and tables, Addition of new fact prosecution. Available in Spanish Language Only. Updated tables in History and Geography, Updated Music section, 150 pages of revisions, Extended and easy-to-read tables.

Dewey Decimal Classification System - 21st Edition (Spanish)(La edicion 21 del Sistema de Classificacion Decimal DEWEY en Español)
DEWEY DECIMAL SYSTEM

Directory of Engineering Document Sources (DEDS)

This directory is the number one reference tool for identifying the source of a document. It covers nearly 10,000 acronyms and abbreviations for associations, societies, organizations, private firms, research centers, and government and military intitialisms from around the world. This cross-indexed directory quickly identifies: Document acronyms, Source of documents, Common document identification numbers, Alternate sources for procurement, Index to document series, Names and addresses of thousands of document originators.

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DEDS DISCOUNT

Index and Directory of International & Non-U.S. National Standards (IDIS)

The IDIS provides quick identification and location for international standards published by Standards Developing Organizations (SDOs) from around the world. This five-volume comprehensive set is organized by: Subject index, Society/numeric listing, Directory of Standards Developing Organizations.

Index and Directory of International and Non-U.S. National Standards

IDIS NON US

International Electrotechnical Commission (IEC)

IEC Multilingual Dictionary

The International Electrotechnical CommIssion (IEC) has published its best-selling Multilingual Dictionary, on CD-ROM. This electronic version, which is expected to be updated annually, replaces the hardcopy dictionary, dated 1992. The contents of the CD-ROM Dictionary are based on the International Electrotechnical Vocabulary (IEV) prepared by IEC Technical Committee 1: Terminology. The Dictionary contains nearly 8,000 pages listing more than 17,000 terms related to electricity, electronics and telecommunications. The CD-ROM features easy navigation and extensive consolidated language indexes in English and French. It also provides the full lexicon of electrotechnical terms, with definitions in English and French. Equivalent terms also appear in Arabic, Dutch, German, Italaian, Japanese, Polish, Portguguese, Russion, Spanish and Swedish. In certain cases, full definitions also appear in Russian and Spanish. The IEC Multilingual Dictionary is a must-have reference tool for: IEC Standard Users, Engineers, Libraries, Technical Colleges/Engineering Schools, Translators, Government/Custom Officials, Trade, and Commerce Officials.

IEC MULTILINGUAL CD

All files contained in the CD-ROM are in Acrobat PDF format.

IEC Multilingual Dictionary of Electricity

Volumes 1-5 are also available in hardcopy and can be purchased separately.

IEC MULTILINGUAL

Official Dictionary of Military Terms

The only authorized source of standard terminology for military use by DoD and NATO (English language terms). Its entries range across the entire spectrum of military use from technology to tactical combat. Incorproates the NATO Glossary of Terms and Definitions.

Compiled by the Joint Chiefs of Staff, U.S. Department of Defense.

Official Dictionary of Military Terms

One Volume, hardbound.

DICTIONARY OF MILITARY

Standards Developing Organizations

Acronyms listed may not be official and are for reference only.

These listings represent a sampling of Standards Developing Organizations with which Global maintains reproduction and working relationships.

If what you need is not listed, please call Global for the fastest, easiest way to get the documents you need, when you need them. Territory restrictions may apply.

CORPORATE STANDARDS

DELPHI-I	Delphi Interior Systems
DELTA	Delta Motor Corporation
FORD	Ford Motor Company
GM	General Motors North America
GMB	General Motors do Brasil, Ltda.
GMW	General Motors Worldwide
HOLDEN	Holden Ltd.
INTERNATIONAL®	International Truck and Engine Corporation
ISUZU	ISUZU Motors Limited
JAGUAR	JAGUAR
JD	Deere & Company
NEW HOLLAND	New Holland North America, Inc.
OPEL	Adam Opel AG
TELCORDIA	Telcordia Technologies, Inc (formerly Bellcore)

STANDARDS DEVELOPING ORGANIZATIONS

A2LA	American Association for Laboratory Accreditation
AA	The Aluminum Association, Inc.
AABB	American Association of Blood Banks
AABC	Associated Air Balance Council
AACC	American Association of Cereal Chemists
AAMA	American Architectural Manufacturers Association
AAMI	Association for the Advancement of Medical Instrumentation
AAR	Association of American Railroads
AASHTO	American Association of State Highway Transportation Officials
AATCC	American Association of Textile Chemists and Colorists
ABMA	American Bearing Manufaturers Association
ABNT	Associaçao Brasileria de Normas Tecnicas (Brasil)
ABS	American Bureau of Shipping
ABYC	American Boat & Yacht Council
ACGIH	American Conference of Governmental Industrial Hygienists
ACI	American Concrete Institute
ACM	Association of Computing Machinery
ACS	American Chemical Society
AENOR	Asociación Española de Normalización y Certificacion
AES	Abrasive Engineering Society
AES	Audio Engineering Society
AFNOR	Association Francaise de Normalisation (France)
A.G.A.	American Gas Association
AGMA	American Gear Manufacturers Association
AHA	American Hardboard Association
AHAM	Association of Home Appliance Manufacturers
AHS	American Helicopter Society
AI	Asphalt Institute
AIA (NAS)	Aerospace Industries Association of America
AIA	American Institute of Achitects
AIA	Automated Imaging Association
AIAA	American Institute of Aeronautics and Astronautics
AIAG	Automotive Industries Action Group
AIChE	American Institute of Chemical Engineers
AIIM	AIIM International
AIP	American Institute of Physics
AISC	American Institute of Steel Construction
AISE	Association of Iron and Steel Engineers
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALMA	Aircraft Locknut Manufacturers Association
ALSC	American Lumber Standards Committee
AMCA	Air Movement & Control Association
AMT	The Association for Manufacturing Technology
ANS	American Nuclear Society
ANSI	American National Standards Institute
AOA	American Optometric Association
AOAC	Assocation of Official Analytical Chemists
AOCS	American Oil Chemists Society
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association
AREMA	American Railway Engineering and Maintenance -of-Way Association
ARI	Air-Conditioning & Refridgeration Institute
ARINC	Aeronautical Radio, Inc.
ASA	Acoustical Society of America
ASAE	American Society of Agricultural Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating & Air Conditioning Engineers
ASM	ASM International
ASME	ASME International
ASMT	American Society for Medical Technology
ASNT	American Society for Nondestructive Testing
ASQ	American Society for Quality
ASSE	American Society of Safety Engineers
ASSE	American Society of Sanitary Engineers
ASTM	ASTM International
ATIS	Alliance for Telecommunications Industry Solutions
ATSC	Advanced Television Systems Commission
AVS	American Vacuum Society
AWCI	Association of Wall & Ceiling Industries
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BICSI	BICSI
BIS	Bureau of Indian Standards
BOCA	Building Officials & Code Administrators
BSI	British Standards Institution
CAGI	Compressed Air & Gas Institute
CAM-I	Computer Aided Manufacturing International Manufacturers Association
CEA	Consumer Electronics Association
CEN	European Committee for Standardization
CENELEC	European Committee for Electrotechnical

Standards Developing Organizations

	Standardization
CEPT	Conference Europeene des Administrations des Postes et des Telecommunications
CGA	Canadian Gas Association
CGA	Compressed Gas Association
CGSB	Canadian General Standards Board
CMA	Chemical Manufacturers Association
CNS	Chinese National Standards (ROC)
CRSI	Concrete Reinforcing Steel Institutte
CEA	Consumer Electronics Association
CEN	European Committee for Standardization
CSA	CSA America
CSA	CSA International
CSI	Construction Specifications Institute
CSMA	Chemical Specialties Manufacturers Association
CTFA	Cosmetic, Tioletry & Fragrance Association
CTI	Cooling Tower Institute
DEF STDS	British Defense Standards (UK)
DIN	Deutsches Institut für Normung, e.V. (Germany)
DS	Dansk Standardiseringsrad (Denmark)
ECA	Electronic Components, Assemblies & Materials Association
ECMA	European Computer Manufacturers Association
EEC	European Council/Commission Legislative Documents
EIA	Electronic Industries Alliance
EIAJ	Electronics Industries Association of Japan
ETSI	European Telecommunications Standards Institute
EUROCAE	European Organization for Civil Aviation Equipment
FCI	Fluid Controls Institute
FM	FM Approvals
FMVSS	Federal Motor Vehicle Safety Standards Service
FPA	Flexible Packaging Association
FSF	Flight Safety Foundation
GA	Gypsum Association
GAMA	General Aviation Manufacturers Association
GEIA	Government Electronics and Information Technology Association
GOSSTANDART	State Committee of the Russian Federation for Standardization Metrology and Certification
GPA	Gas Processors Association
HI	Hydraulic Institute
HVI	Home Ventilating Institute
IAPMO	International Association of Plumbing & Mechanical Officials
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
ICBO	International Conference of Building Officials
ICEA	Insulated Cable Engineers Association, Inc.
ICC	International Code Council
IEC	International Electrotechnical Commission
IEEE	The Institute of Electrical & Electronics Engineers, Inc.
IESNA	The Illuminating Engineering Society of North America
IFAI	Industrial Fabrics Association International
IFI	Industrial Fasteners Institute
IIE	Institute of Industrial Engineers
IMO	International Maritime Organization
IMSA	International Municipal Signal Association
IPC	Association Connecting Electronics Industries
IQS	International Quality Systems
ISA	Instrumentation, Systems and Automation Society
ISEA	Industrial Safety Equipment Association
ISO	International Organization for Standardization
ITE	Institute of Transportation Engineers
ITI	Information Technology Industry Council
ITS	Istitute for Telecommunications Science
ITU	International Telecommunication Union
JAA	Joint Aviation Authorities
JEDEC	Solid State Technology Association
JSA	Japanese Standards Association
KNS	Korean National Standards
LIA	Laser Institute of America
MSS	Manufacturers Standardization Society of the Valve & Fittings Industry
NACE	NACE International
NAPM	National Association of Photographic Manufacturing
NBBVI	National Board of Boiler & Pressure Vessel Inspectors
NCCLS	National Committee for Clinical Laboratory Standards
NEBB	National Environmental Balancing Bureau
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NFOR	National Forest Products Association
NFPA	National Fire Protection Association
NFPA	National Fluid Power Association
NISO	National Information Standards Organization
NMEA	National Marine Electronic Association
NSC	National Safety Council
NSF	NSF International
NSF	Norges Standardiseringsforbund (Norway)
ON	Osterreichisches Normungsinstitut (Austria)
OPEI	Outdoor Power Equipment Institute
OSA	Optical Society of America
PDI	Plumbing & Drainage Institute
PFI	Pipe Fabrication Institute
PIA	Parachute Industry Association
PPI	Plastics Pipe Institute, Inc.
QCSS	Quality Control Systems and Services, Inc.
RIA	Robotics Industries Association
RMA	Rubber Manufacturers Association
RTCA	RTCA, Inc.
RVIA	Recreation Vehicle Industry Association
SA	Standards Australia
SABS	South African Bureau of Standards
SAE	SAE International
SASO	Saudi Arabian Standards Organization
SBAC	Society of British Aerospace Companies
SBCCI	Southern Building Code Congress International
SCC	Standards Council of Canada
SCTE	Society of Cable Telecommunications Engineers
SDI	Steel Deck Institute
SDI	Steel Door Institute
SES	Standards Engineering Society
SFS	Suomen Standardisoimislitto Informaatiopalvelu (Finland)
SIMCOM	SIMCOM
SIS	Standardiseringkommissionen i Sverige (Sweden)
SJI	Sheet Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association

SMMA	Small Motor Manufacturing Association
SMPTE	Society of Motion Picture & Television Engineers
SNZ	Standards New Zealand
SPI	Society of the Plastics Industry
SSPC	The Society For Protective Coatings
TAPPI	Technical Association of the Pulp & Paper Industry
TCA	Title Council of America
TEMA	Tabular Exchanger Manufacturers Association, Inc.
TIA	Telecommunications Industry Association
TMA	Toy Manufacturers Association
TTMA	Truck Trailer Manufacturers Assocication
UL	Underwriters Laboratories, Inc.
UNI	Ente Nazionale Italiano de Unificazione (Italy)
USP	U.S. Pharmacopoeia
VDE	Verband Deutscher Elektrotechniker e.V. (Germany)
VDI	Vereins Deutscher Ingenieure (Germany)
VRCI	Variable Resistive Components Institute
WSFI	Wood & Synthetic Flooring Institute

U.S. GOVERNMENT & MILITARY DOCUMENTS

Department of the Air Force
Key Agencies:

- Headquarters United States Air Force
- Air Force Flight Dyanmics Laboratory (AFFDL)
- Air Force Logistics Command (AFLC)
- Air Force Materiel Command (AFMC)

Key document catagories include:

- Air Force Forms (AF FORM)
- Air Force Handbooks (AFH)
- Air Force Indexes (AFIND)
- Air Force Instructions (AFI)
- Air Force Joint Manuals (AFJMAN)
- Air Force Manuals (AFMAN)
- Air Force Pamphlets (AFPAM)
- Air Force Occupational Safety, Fire Prevention and Health Program Standards (AFOSH)
- Air Force Regulations (AFR)

Department of the Army
Key Agencies:

- U.S. Army Materiel Command (AMC)
- U.S. Army Aviation Systems Command (AVSCOM)
- Corp. of Engineers (COE)
- U.S. Army Communications and Electronics Command (CECOM)
- U.S. Army Missile Command (MICOM)
- U.S. Army Natick Research and Development Command (NARADCOM)
- U.S. Army Tank Automotive Command (TACOM)
- U.S. Army Training and Doctrine Command (TRADOC)

Key document catagories include:

- Army Regulations (AR)
- Department of Army Forms (DA FORM)
- Field Manuals (FM)
- Department of the Army Pamphlets (DA PAM)
- Supply Bulletins (SB)
- Supply Catalogs (SC)
- Supply Manuals (SSM)
- Technical Bulletins (TB)
- Technical Manuals (TM)

Department of the Defense (DoD)
Key Agencies:

- Defense Informations Systems Agency (DISA)
- Defense Supply Center Columbus (DSCC)
- Defense Logistics Agency (DLA)
- Defense Mapping Agency (DMA)
- Defense Printing Services (DAPS)

Key document catagories include:

- Performance/Detail Specification (MIL-PREF/DTL)
- Commercial Item Descriptions (CID)
- Department of Defense Forms (DD FORM)
- Federal Handbooks (FED-HDBK)
- Federal Specifications (FED-SPEC)
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- Military Bulletins (MIL-BULL)
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- Military Standard Drawings (MS) - sheet form
- Qualified Products List (QPL)
- Standards Microcircuit Drawing (SMD)

Department of the Navy
Key Agencies

- Office of the Chief of Naval Operations (OPNAV)
- Office of the Secretary of the Navy (SECNAV)
- Naval Facilities Engineering Command (NAVFAC)
- Marine Corps
- Naval Air Systems Command (NAVAIR)
- Naval Supply Systems Command (NAVSUP)
- Space and Naval Warfare Systems Command (SPAWAR)

Key document catagories include all Naval Instructions and Directives from all major commands.

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Key Agencies

- Code of Federal Regulations (CFR)
- Department of Commerce (DOC)
- Department of Defence (DoD)
- Department of Energy (DOE)
- Department of Labor (DOL)
- Department of Transportation (DOT)
- Environmental Protection Agency (EPA)
- Federal Aviation Administration (FAA)
- Food and Drug Administration (FDA)
- Federal Communications Commission (FCC)
- General Services Administration (GSA)
- North Atlantic Treaty Organization (NATO)
- Nuclear Regulatory Commission (NRC)
- Occupational Safety and Health Administration (OSHA)

National Aeronautics and Space Administration (NASA)
Key Agencies

- Goddard Space Flight Center (GSFC)
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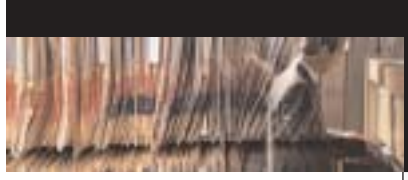

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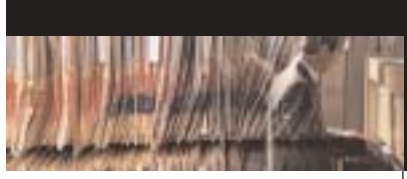

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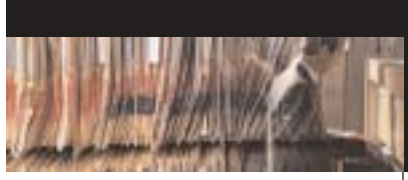

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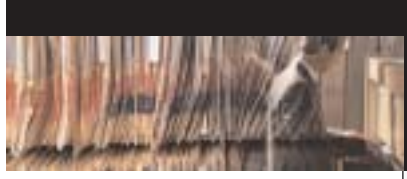

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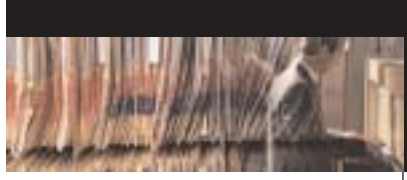

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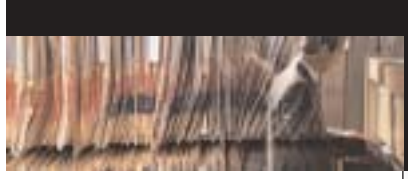

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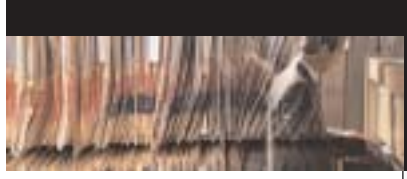

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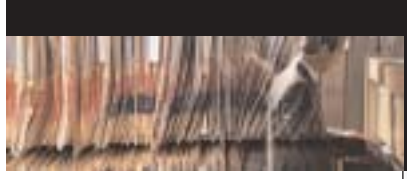

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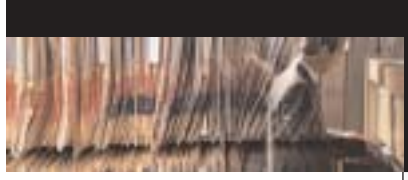

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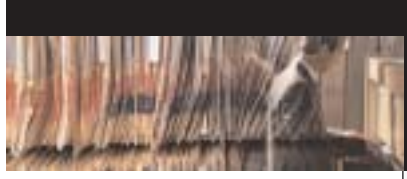

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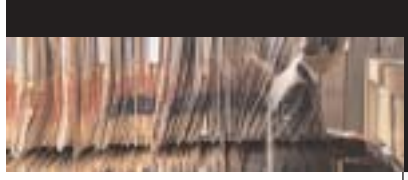

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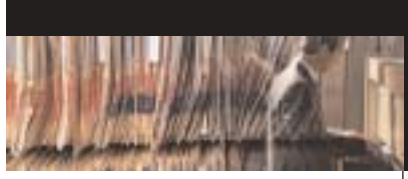

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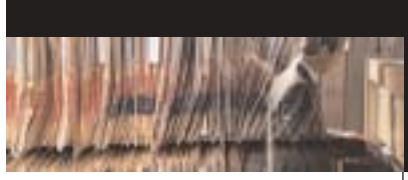

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