§ 1910.6 Incorporation by reference.

(a)(1) The standards of agencies of the U.S. Government, and organizations which are not agencies of the U.S. Government which are incorporated by reference in this part, have the same force and effect as other standards in this part. Only the mandatory provisions (i.e., provisions containing the word “shall” or other mandatory language) of standards incorporated by reference are adopted as standards under the Occupational Safety and Health Act.

(2) Any changes in the standards incorporated by reference in this part and an official historic file of such changes are available for inspection in the Docket Office at the national office of the Occupational Safety and Health Administration, U.S. Department of Labor, Washington, DC 20210; telephone: 202–893–2350 (TTY number: 877–889–5627). These standards are also available for inspection at any Regional Office of the Occupational Safety and Health Administration (OSHA), or at the OSHA Docket Office, U.S. Department of Labor, 200 Constitution Avenue NW., Room N–2625, Washington, DC 20210; telephone: 202–893–2350 (TTY number: 877–889–5627). They are also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of these standards at NARA, telephone: 202–741–6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(b) The following material is available for purchase from the American Conference of Governmental Industrial Hygienists (ACGIH), 1014 Broadway, Cincinnati OH 45202:


(2) Threshold Limit Values and Biological Exposure Indices for 1986–87 (1986), IBR approved for §1910.120, PEL definition.

(2) Threshold Limit Values and Biological Exposure Indices for 1986–87 (1986), IBR approved for §1910.120, PEL definition.

(c) The following material is available for purchase from the American Society of Agricultural Engineers (ASAE), 2950 Niles Road, Post Office Box 229, St. Joseph, MI 49085:


(2) [Reserved]

(d) The following material is available for purchase from the Agriculture Ammonia Institute-Rubber Manufacturers (AAI-RMA) Association, 1400 K St. NW, Washington DC 20005:

(1) AAI-RMA Specifications for Anhydrous Ammonia Hose, IBR approved for §1910.111(b)(8)(i).
(2) [Reserved]

e) Except as noted, copies of the standards listed below in this paragraph are available for purchase from the American National Standards Institute (ANSI), 25 West 43rd Street, 4th Floor, New York, NY 10036; telephone: 212-642-4900; fax: 212-398-0023; Web site: http://www.ansi.org.

(1)–(2) [Reserved]

(3) ANSI A11.1–65 (R 70) Practice for Industrial Lighting, IBR approved for §§ 1910.219(c)(5)(iii); 1910.261 (a)(3)(i), (c)(10), and (k)(21); and 1910.265(c)(2).


(5) [Reserved]


(9) ANSI A14.3–56 Safety Code for Fixed Ladders, IBR approved for §§ 1910.68(b) (4) and (12); 1910.179(c)(2); and 1910.261 (a)(3)(vi) and (c)(3)(i).


(12) ANSI A90.1–69 Safety Standard for Manlifts, IBR approved for §1910.68(b)(3).

(13) ANSI A92.2–69 Standard for Vehicle Mounted Elevating and Rotating Work Platforms, IBR approved for §1910.67 (b)(1), (2), (c)(3), and (4) and 1910.268(s)(1)(v).

(14) ANSI A120.1–70 Safety Code for Powered Platforms for Exterior Building Maintenance, IBR approved for §1910.66 app. D (b) through (d).


(18) ANSI B30.2–43 (R 52) Safety Code for Cranes, Derrick, and Hoists, IBR approved for §1910.261 (a)(3)(xi), (c)(2)(vi), and (c)(3)(i) and (iv).

(19) ANSI B30.2.0–67 Safety Code for Overhead and Gantry Cranes, IBR approved for §§1910.179(b)(2); 1910.261 (a)(3)(xiii), (c)(2)(v), and (c)(3)(i) and (iv).


(21) ANSI B30.6–69 Safety Code for Derrick, IBR approved for §§1910.181(b)(2) and 1910.268(j)(4)(iv) (E) and (H).

(22) ANSI B31.1–55 Code for Pressure Piping, IBR approved for §1910.261(g)(18)(i).


(29) ANSI B56.1–69 Safety Standard for Powered Industrial Trucks, IBR approved for §§1910.178(a) (2) and (3) and 1910.261 (a)(3)(xiv), (b)(6), (m)(2), and (m)(5)(iii).
(30) ANSI B57.1–65 Compressed Gas Cylinder Valve Outlet and Inlet Connections, IBR approved for §1910.253(b)(1)(iii).

(31) [Reserved]


(33) [Reserved]

(34) ANSI B57.1–65 Compressed Gas Cylinder Valve Outlet and Inlet Connections, IBR approved for §1910.253(b)(1)(iii).

(35) [Reserved]


(37) [Reserved]

(38) ANSI C33.2–56 Safety Standard for Transformer-Type Arc Welding Machines, IBR approved for §1910.254(b)(1).

(39) [Reserved]

(40) ANSI C33.2–56 Safety Standard for Transformer-Type Arc Welding Machines, IBR approved for §1910.254(b)(1).

(41) ANSI B31.1–75 Seamless Copper Water Tube Specification, IBR approved for §1910.110(b) (8)(ii) and (13)(ii)(b)(1).

(42) ANSI B31.1–75 Seamless Copper Water Tube Specification, IBR approved for §1910.110(b) (8)(ii) and (13)(ii)(b)(1).


(45) [Reserved]

(46) ANSI B31.1–75 Seamless Copper Water Tube Specification, IBR approved for §1910.110(b) (8)(ii) and (13)(ii)(b)(1).


(48) [Reserved]


(62)–(63) [Reserved]

(64) ANSI Z49.1–67 Safety in Welding and Cutting, IBR approved for §1910.252(c)(1)(iv) (A) and (B).


(66) ANSI Z4.1–63 Safety Standard for Non-Medical X-Ray and Sealed Gamma Ray Sources, IFR approved for §1910.252(d) (1)(viii) and (2)(ii).


(74) ANSI Z41.1–1967 Men’s Safety Toe Footwear; IFR approved for §1910.261(i)(4).

(75) ANSI Z87.1–1968 Practice of Occupational and Educational Eye and Face Protection; IFR approved for §1910.261(a)(3)(xxv), (d)(1)(ii), (f)(5), (g)(1), (g)(15)(v), (g)(18)(ii), and (i)(4).

(76) ANSI Z87.1–1969 Safety Requirements for Industrial Head Protection; IFR approved for §1910.261(a)(3)(xxv), (b)(2), (g)(15)(v), and (i)(4).
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(77) ANSI Z89.2–1971 Safety Requirements for Industrial Protective Helmets for Electrical Workers, Class B; IBR approved for § 1910.268(i)(1).

(f) The following material is available for purchase from the American Petroleum Institute (API), 1220 L Street NW, Washington DC 20005:

(1) [Reserved]


(g) The following material is available for purchase from the American Society of Mechanical Engineers (ASME), United Engineering Center, 345 East 47th Street, New York, NY 10017:

(1) ASME Boiler and Pressure Vessel Code, Sec. VIII, 1968, IBR approved for §§ 1910.103; 1910.104(b)(4)(ii); 1910.106(b)(1)(iv)(b)(2) and (i)(3)(ii); 1910.107; 1910.110(b)(11) (i)(b) and (iii)(a)(J); 1910.111(b)(2) (i), (ii), and (iv); and 1910.169(a)(2) (i) and (ii).

(2) ASME Boiler and Pressure Vessel Code, Sec. VIII, Paragraph UG–84, 1968, IBR approved for § 1910.104 (b)(4)(ii) and (b)(5)(iii).


(h) Copies of the standards listed below in this paragraph (h) are available for purchase from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428–2959; Telephone: 610–832–9585; Fax: 610–832–9555; Email: seviceastm.org; Web site: http://www.astm.org. Copies of historical standards or standards that ASTM does not have may be purchased from Information Handling Services, Global Engineering Documents, 15 Inverness Way East, Englewood, CO 80112; Telephone: 1–800–854–7179; Email: global@ihs.com; Web sites: http://global.ihs.com or http://www.store.ihs.com.


(2) ASTM A 53–69, Welded and Seamless Steel Pipe, IBR approved for §§ 1910.110 and 1910.111.


(6) ASTM B 88–66A, Seamless Copper Water Tube, IBR approved for § 1910.252.

(7) ASTM B 88–69, Seamless Copper Water Tube, IBR approved for § 1910.110.
(8) ASTM B 117-64, Salt Spray (Fog) Test, IBR approved for §1910.268.
(9) ASTM B 210-68, Aluminum-Alloy Drawn Seamless Tubes, IBR approved for §1910.110.
(11) ASTM D 5-65, Test for Penetration by Bituminous Materials, IBR approved for §1910.106.
(13) ASTM D 86-65, Test for Saybolt Viscosity, IBR approved for §1910.106.
(14) ASTM D 93-71, Test for Flash Point by Pensky-Martens, IBR approved for §1910.106.
(15) ASTM D 2161-66, Conversion Tables for SUS, IBR approved for §1910.106.
(i) The following material is available for purchase from the American Welding Society (AWS), 550 NW, LeJeune Road, P.O. Box 351040, Miami FL 33135:
(1)–(2) [Reserved]
(3) AWS B3.0-41 Standard Qualification Procedure, IBR approved for §1910.67(c)(5)(1).
(5) AWS D2.0-69 Specifications for Welding Highway and Railway Bridges, IBR approved for §1910.67(c)(5)(iv).
(6) AWS D8.4-61 Recommended Practices for Automotive Welding Design, IBR approved for §1910.27(c)(5)(ii).
(j) The following material is available for purchase from the Compressed Gas Association (CGA), 1235 Jefferson Davis Highway, Arlington, VA 22202:
(k) The following material is available for purchase from the Department of Commerce:
(11) CGA 1957 Standard Hose Connection Standard, IBR approved for §1910.253(e) (4)(v) and (5)(iii).
(12) CGA and RMA (Rubber Manufacturer’s Association) Specification for Rubber Welding Hose (1958), IBR approved for §1910.253(e)(5)(i).
(13) CGA 1958 Regulator Connection Standard, IBR approved for §1910.253(e) (4)(iv) and (6).
(1) The following material is available for purchase from the Crane Manufacturer’s Association of America, Inc. (CMAA), 1 Thomas Circle NW, Washington DC 20005:
(2) [Reserved]

(m) The following material is available for purchase from the General Services Administration:
(2) [Reserved]

(n) The following material is available for purchase from the Department of Health and Human Services:
(1) Publication No. 76–120 (1975), List of Personal Hearing Protectors and Attenuation Data, IBR approved for §1910.95 App. B.
(2) [Reserved]

(o) The following material is available for purchase from the Institute of Makers of Explosives (IME), 420 Lexington Avenue, New York, NY 10017:
(1) IME Pamphlet No. 17, 1960, Safety in the Handling and Use of Explosives, IBR approved for §§1910.261 (a)(4)(iii) and (c)(14)(ii).
(2) [Reserved]

(p) The following material is available for purchase from the National Electrical Manufacturer’s Association (NEMA):
(2) [Reserved]

(q) The following material is available for purchase from the National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02269; Telephone: 800–344–3555 or 617–770–3000; Fax: 1–800–593–6372 or 1–508–895–8301; Email: custserv@nfpa.org; Web site: http://www.nfpa.org.


(16) [Reserved]


(20) NFPA 86A–1969 Standard for Oven and Furnaces Design, Location and Equipment, IBR approved for §§1910.107(j)(1) and (1)(3) and 1910.108(b)(2) and (d)(2).


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(35) NFPA 51A (2001) Standard for Acetylene Cylinder Charging Plants, IBR approved for § 1910.102(b) and (c). Copies of NFPA 51A–2001 are available for purchase from the: National Fire Protection Association, 1 Battery March Park, Quincy, MA 02169–7471; telephone: 1–800–344–3557; e-mail: custserv@nfpa.org.

(36) NFPA 51A (2006) Standard for Acetylene Cylinder Charging Plants, IBR approved for § 1910.102(b) and (c). Copies of NFPA 51A–2006 are available for purchase from the: National Fire Protection Association, 1 Battery March Park, Quincy, MA 02169–7471; telephone: 1–800–344–3557; e-mail: custserv@nfpa.org.


(r) The following material is available for purchase from the National Fire Protection Association, 1 Battery March Park, Quincy, MA 02169–7471; telephone: 1–800–344–3557; e-mail: custserv@nfpa.org.

(s) The following material is available for purchase from the National Institute for Occupational Safety and Health (NIOSH):

(1) Registry of Toxic Effects of Chemical Substances, 1978, IBR approved for § 1910.20(c)(13)(i) and appendix B.

(t) The following material is available for purchase from the Public Health Service:

(1) U.S. Pharmacopeia, IBR approved for § 1910.134(d)(1).


(u) The following material is available for purchase from the Society of Automotive Engineers (SAE), 485 Lexington Avenue, New York, NY 10017:

(1) SAE J185, June 1988, Recommended Practice for Access Systems for Off-Road Machines, IBR approved for § 1910.266(f)(5)(i).


(3) SAE J400, April 1988, Performance Criteria for Rollover Protective Structures (ROPS) for Construction, Earthmoving, Forestry and Mining Machines, IBR approved for § 1910.266(f)(3)(i).


(v) The following material is available for purchase from Underwriters Laboratories (UL), 207 East Ohio Street, Chicago, IL 60611:

(1) UL 58–61 Steel Underground Tanks for Flammable and Combustible Liquids, 5th Ed., IBR approved for § 1910.111(b)(1) (i) and (iii).

(1) UL 142–68 Steel Above Ground Tanks for Flammable and Combustible
Occupational Safety and Health Admin., Labor § 1910.6


(x) The following material is available for purchase from the: International Code Council, Chicago District Office, 4051 W. Flossmoor Rd., Country Club Hills, IL 60478; telephone: 708–799–2200, x3–3801; facsimile: 001–708–799–4981; e-mail: order@iccsafe.org.


(2) [Reserved]

(y)(1) The following materials are available for purchase from the: International Standards Organization (ISO) through ANSI, 25 West 43rd Street, Fourth Floor, New York, NY 10036–7417; Telephone: 212–642–4980; Fax: 212–302–1286; Email: info@ansi.org; Web site: http://www.ansi.org.

(2) Documents not available in the ANSI store may be purchased from:

(i) Document Center Inc., 111 Industrial Road, Suite 9, Belmont, 94002; Telephone: 650–591–7600; Fax: 650–591–7617; Email: info@document-center.com; Web site: www.document-center.com.


(iii) Global Engineering Documents, 15 Inverness Way East, Englewood, CO 80112; Telephone: 1–800–584–7179 or 303–897–7856; Fax: 303–897–2740; Email: global@ihs.com; Web sites: http://global.ihs.com or http://www.store.ihs.com.

(iv) IJI Infodisk, Inc., 610 Winters Avenue, Paramus, NJ 07652; Telephone: 201–986–1131; Fax: 201–986–7886; Email: sales@iilinfo.com; Web site: www.iiliinfo.com.

(v) Techstreet, a business of Thomson Reuters, 3916 Ranchero Drive, Ann Arbor, MI 48108; Telephone: 800–699–2977 or 734–780–8000; Fax: 734–780–2046; Email: techstreet.service@thomsonreuters.com; Web site: www.Techstreet.com.


(2) [Reserved]

(1) A separate list of standards will be available on the Internet at http://osha.osha.gov/pls/oshaweb/OSHAmerica_xp/OSHAmerica_Welcome_xp.html.
§ 1910.7 Definition and requirements for a nationally recognized testing laboratory.

(a) Application. This section shall apply only when the term nationally recognized testing laboratory is used in other sections of this part.

(b) Laboratory requirements. The term nationally recognized testing laboratory (NRTL) means an organization which is recognized by OSHA in accordance with appendix A of this section and which tests for safety, and lists or labels or accepts, equipment or materials and which meets all of the following criteria:

1. For each specified item of equipment or material to be listed, labeled or accepted, the NRTL has the capability (including proper testing equipment and facilities, trained staff, written testing procedures, and calibration and quality control programs) to perform:

   i. Testing and examining of equipment and materials for workplace safety purposes to determine conformance with appropriate test standards; or

   ii. Experimental testing and examining of equipment and materials for workplace safety purposes to determine conformance with appropriate test standards or performance in a specified manner.

   (2) The NRTL shall provide, to the extent needed for the particular equipment or materials listed, labeled, or accepted, the following controls or services:

      i. Implements control procedures for identifying the listed and labeled equipment or materials;

      ii. Inspects the run of production of such items at factories for product evaluation purposes to assure conformance with the test standards; and

      iii. Conducts field inspections to monitor and to assure the proper use of its identifying mark or labels on products;

   (3) The NRTL is completely independent of employers subject to the tested equipment requirements, and of any manufacturers or vendors of equipment or materials being tested for these purposes; and,

   (4) The NRTL maintains effective procedures for:

      i. Producing creditable findings or reports that are objective and without bias; and

      ii. Handling complaints and disputes under a fair and reasonable system.

(c) Test standards. An appropriate test standard referred to in §1910.7(b)(1) (i) and (ii) is a document which specifies the safety requirements for specific equipment or class of equipment and is:

   (1) Recognized in the United States as a safety standard providing an adequate level of safety, and

   (2) Compatible with and maintained current with periodic revisions of applicable national codes and installation standards, and

   (3) Developed by a standards developing organization under a method providing for input and consideration of views of industry groups, experts, users, consumers, governmental authorities, and others having broad experience in the safety field involved, or

   (4) In lieu of paragraphs (c) (1), (2), and (3), the standard is currently designated as an American National