

§ 1910.302

29 CFR Ch. XVII (7–1–23 Edition)

(d) *Safety requirements for special equipment.* These regulations will be contained in §§ 1910.381 through 1910.398.

(e) *Definitions.* Definitions applicable to each division are contained in § 1910.399.

[46 FR 4056, Jan. 16, 1981; 46 FR 40185, Aug. 7, 1981]

DESIGN SAFETY STANDARDS FOR ELECTRICAL SYSTEMS

SOURCE: Sections 1910.302 through 1910.308 appear at 72 FR 7190, Feb. 14, 2007, unless otherwise noted.

§ 1910.302 Electric utilization systems.

Sections 1910.302 through 1910.308 contain design safety standards for electric utilization systems.

(a) *Scope*—(1) *Covered.* The provisions of §§ 1910.302 through 1910.308 cover electrical installations and utilization equipment installed or used within or on buildings, structures, and other premises, including:

- (i) Yards;
- (ii) Carnivals;
- (iii) Parking and other lots;
- (iv) Mobile homes;
- (v) Recreational vehicles;
- (vi) Industrial substations;
- (vii) Conductors that connect the installations to a supply of electricity; and
- (viii) Other outside conductors on the premises.

(2) *Not covered.* The provisions of §§ 1910.302 through 1910.308 do not cover:

- (i) Installations in ships, watercraft, railway rolling stock, aircraft, or automotive vehicles other than mobile homes and recreational vehicles;
- (ii) Installations underground in mines;
- (iii) Installations of railways for generation, transformation, transmission, or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signaling and communication purposes;
- (iv) Installations of communication equipment under the exclusive control of communication utilities, located outdoors or in building spaces used exclusively for such installations; or
- (v) Installations under the exclusive control of electric utilities for the purpose of communication or metering; or

for the generation, control, transformation, transmission, and distribution of electric energy located in buildings used exclusively by utilities for such purposes or located outdoors on property owned or leased by the utility or on public highways, streets, roads, etc., or outdoors by established rights on private property.

(b) *Extent of application*—(1) *Requirements applicable to all installations.* The following requirements apply to all electrical installations and utilization equipment, regardless of when they were designed or installed:

§ 1910.303(b)—Examination, installation, and use of equipment

§ 1910.303(c)(3)—Electrical connections—Splices

§ 1910.303(d)—Arcing parts

§ 1910.303(e)—Marking

§ 1910.303(f), except (f)(4) and (f)(5)—Disconnecting means and circuits

§ 1910.303(g)(2)—600 volts or less—Guarding of live parts

§ 1910.304(a)(3)—Use of grounding terminals and devices

§ 1910.304(f)(1)(i), (f)(1)(iv), and (f)(1)(v)—Overcurrent protection—600 volts, nominal, or less

§ 1910.304(g)(1)(ii), (g)(1)(iii), (g)(1)(iv), and (g)(1)(v)—Grounding—Systems to be grounded

§ 1910.304(g)(4)—Grounding—Grounding connections

§ 1910.304(g)(5)—Grounding—Grounding path

§ 1910.304(g)(6)(iv)(A) through (g)(6)(iv)(D), and (g)(6)(vi)—Grounding—Supports, enclosures, and equipment to be grounded

§ 1910.304(g)(7)—Grounding—Nonelectrical equipment

§ 1910.304(g)(8)(i)—Grounding—Methods of grounding fixed equipment

§ 1910.305(g)(1)—Flexible cords and cables—Use of flexible cords and cables

§ 1910.305(g)(2)(ii) and (g)(2)(iii)—Flexible cords and cables—Identification, splices, and terminations

§ 1910.307, except as specified in § 1910.307(b)—Hazardous (classified) locations

(2) *Requirements applicable to installations made after March 15, 1972.* Every electrical installation and all utilization equipment installed or overhauled after March 15, 1972, shall comply with the provisions of §§ 1910.302 through

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1910.308, except as noted in paragraphs (b)(3) and (b)(4) of this section.

(3) *Requirements applicable only to installations made after April 16, 1981.* The following requirements apply only to electrical installations and utilization equipment installed after April 16, 1981:

§ 1910.303(h)(4)—Over 600 volts, nominal—Entrance and access to work space

§ 1910.304(f)(1)(vii) and (f)(1)(viii)—Overcurrent protection—600 volts, nominal, or less

§ 1910.304(g)(9)(i)—Grounding—Grounding of systems and circuits of 1000 volts and over (high voltage)

§ 1910.305(j)(6)(ii)(D)—Equipment for general use—Capacitors

§ 1910.306(c)(9)—Elevators, dumbwaiters, escalators, moving walks, wheelchair lifts, and stairway chair lifts—Interconnection between multicar controllers

§ 1910.306(i)—Electrically driven or controlled irrigation machines

§ 1910.306(j)(5)—Swimming pools, fountains, and similar installations—Fountains

§ 1910.308(a)(1)(ii)—Systems over 600 volts, nominal—Aboveground wiring methods

§ 1910.308(c)(2)—Class 1, Class 2, and Class 3 remote control, signaling, and power-limited circuits—Marking

§ 1910.308(d)—Fire alarm systems

(4) *Requirements applicable only to installations made after August 13, 2007.* The following requirements apply only to electrical installations and utilization equipment installed after August 13, 2007:

§ 1910.303(f)(4)—Disconnecting means and circuits—Capable of accepting a lock

§ 1910.303(f)(5)—Disconnecting means and circuits—Marking for series combination ratings

§ 1910.303(g)(1)(iv) and (g)(1)(vii)—600 Volts, nominal, or less—Space about electric equipment

§ 1910.303(h)(5)(vi)—Over 600 volts, nominal—Working space and guarding

§ 1910.304(b)(1)—Branch circuits—Identification of multiwire branch circuits

§ 1910.304(b)(3)(i)—Branch circuits—Ground-fault circuit interrupter protection for personnel

§ 1910.304(f)(2)(i)(A), (f)(2)(i)(B) (but not the introductory text to

§ 1910.304(f)(2)(i)), and (f)(2)(iv)(A)—Overcurrent protection—Feeders and branch circuits over 600 volts, nominal

§ 1910.305(c)(3)(ii)—Switches—Connection of switches

§ 1910.305(c)(5)—Switches—Grounding

§ 1910.306(a)(1)(ii)—Electric signs and outline lighting—Disconnecting means

§ 1910.306(c)(4)—Elevators, dumbwaiters, escalators, moving walks, wheelchair lifts, and stairway chair lifts—Operation

§ 1910.306(c)(5)—Elevators, dumbwaiters, escalators, moving walks, wheelchair lifts, and stairway chair lifts—Location

§ 1910.306(c)(6)—Elevators, dumbwaiters, escalators, moving walks, wheelchair lifts, and stairway chair lifts—Identification and signs

§ 1910.306(c)(7)—Elevators, dumbwaiters, escalators, moving walks, wheelchair lifts, and stairway chair lifts—Single-car and multicar installations

§ 1910.306(j)(1)(iii)—Swimming pools, fountains, and similar installations—Receptacles

§ 1910.306(k)—Carnivals, circuses, fairs, and similar events

§ 1910.308(a)(5)(v) and (a)(5)(vi)(B)—Systems over 600 volts, nominal—Interrupting and isolating devices

§ 1910.308(a)(7)(vi)—Systems over 600 volts, nominal—Tunnel installations

§ 1910.308(b)(3)—Emergency power systems—Signs

§ 1910.308(c)(3)—Class 1, Class 2, and Class 3 remote control, signaling, and power-limited circuits—Separation from conductors of other circuits

§ 1910.308(f)—Solar photovoltaic systems

(c) *Applicability of requirements for disconnecting means.* The requirement in § 1910.147(c)(2)(iii) that energy isolating devices be capable of accepting a lock-out device whenever replacement or major repair, renovation or modification of a machine or equipment is performed, and whenever new machines or equipment are installed after January 2, 1990, applies in addition to any requirements in §§ 1910.303 through 1910.308 that disconnecting means be capable of being locked in the open position under certain conditions.