

Group 13 - Cranes and Other Hoisting Equipment

§4884 Scope

- (a) **The Orders in this Group** shall apply to derricks, cranes, and boom-type excavators, but they shall not apply to aerial devices designed and used for positioning personnel. (See Article 24).
- (b) **Hammerhead tower cranes manufactured** after May 16, 1993 shall conform to ASME B30.3-1990, Hammerhead Tower Cranes.
- (c)(1)(A) **Cranes and derricks** manufactured after September 28, 1986, through June 23, 1999, shall be designed, constructed and installed in accordance with the following applicable American National Standards Institute (ANSI) and/or American Society of Mechanical Engineers (ASME) standards or those listed in subsection (c)(1)(B):
 B30.2-1983, Overhead and Gantry Cranes (Top Running Bridge Multiple Girder)
 B30.3-1975, Hammerhead Tower Cranes
 B30.4-1981, Portal, Tower, and Pillar Cranes
 B30.5-1982, Crawler, Locomotive, and Truck Cranes
 B30.6-1977, Derricks
 B30.7-1977, Base Mounted Drum Hoists
 B30.8-1982, Floating Cranes and Floating Derricks
 B30.11-1980, Monorails and Underhung Cranes
 B30.13-1977, Controlled Mechanical Storage Cranes
- (B) **Cranes and derricks** manufactured after June 23, 1999 shall be designed, constructed, and installed in accordance with the following applicable American National Standards Institute (ANSI)/American Society of Mechanical Engineers (ASME) standards which are hereby incorporated by reference:
 B30.2-1996, Overhead and Gantry Cranes (Top Running Bridge, Single or Multiple Girder, Top Running Trolley Hoist)
 B30.3-1996, Construction Tower Cranes
 B30.4-1996, Portal, Tower, and Pedestal Cranes
 B30.5-1994, Mobile and Locomotive Cranes
 B30.6-1995, Derricks
 B30.7-1994, Base Mounted Drum Hoists
 B30.8-1993, Floating Cranes and Floating Derricks
 B30.11-1993, Monorails and Underhung Cranes
 B30.13-1996, Storage/Retrieval (S/R) Machines and Associated Equipment
 B30.17-1992, Overhead and Gantry Cranes (Top Running Bridge, Single Girder, Underhung Hoist)
 B30.17-1980, Overhead and Gantry Cranes (Top Running Bridge, Single Girder, Underhung Hoist)
- (2) **Articulating boom cranes** manufactured after May 16, 1993 shall conform to these regulations and be provided with a permanently attached metal label stating that the equipment has been designed and constructed in accordance with ASME/ANSI B30.22-1987, and B30.22a-1988 Addenda, Articulating Boom Cranes, herein incorporated by reference, or has been approved as required by the provisions of Section 3206 of these orders.
- (d)(1) **Except as provided in subsection (d)(2)**, all cranes and derricks manufactured prior to September 28, 1986, shall conform to this subsection and shall be designed, constructed and installed in accordance with the following applicable ANSI standards:
 B30.2-1967, Overhead and Gantry Cranes
 B30.4-1973, Portal, Tower, and Pillar Cranes
 B30.5-1968, Crawler, Locomotive, and Truck Cranes
 B30.6-1969, Derricks
 B30.15-1973, Mobile Hydraulic Cranes
- EXCEPTION:** Section 15-1.3.2(d) of B30.15-1973, Two-Blocking Damage Prevention Feature.
- (2) **Cranes manufactured** prior to January 15, 1974, shall be modified to comply with applicable regulations in Group 13, Cranes and Other Hoisting Equipment of the General Industry Safety Orders, unless it can be shown during the process of certification that a crane cannot feasibly or economically be modified to comply with any one or more applicable requirements and the crane substantially complies with applicable Group 13 regulations and the ANSI or other design standard to which the crane was manufactured.
- (e) **Cranes and derricks which do not meet** the applicable ANSI standards shall be designed, constructed and installed in accordance with the recommendations of a currently registered mechanical or civil engineer.

- (f) **Cranes and derricks shall be operated, tested,** inspected, and maintained in accordance with these Orders.
- (g) **All electrically powered cranes and derricks** shall also comply with applicable electrical safety orders.

Article 91 Definitions

§4885 Definitions

- Accessory.** A secondary part or assembly of parts which contribute to the over-all function and usefulness of a machine.
- Angle Indicator (Boom).** An accessory which measures and indicates the angle of boom to the horizontal.
- Articulating Boom Crane.** A crane articulated by hydraulic cylinders, powered by an internal combustion engine or electric motor.
- Automatic Crane.** A crane which when activated operates through a preset cycle or cycles.
- Auxiliary Hoist.** A supplemental hoisting unit of lighter capacity and usually higher speed than provided for the main hoist.
- Axis of Rotation.** The vertical axis around which the crane superstructure rotates.
- Base (Mounting).** The traveling base or carrier on which the rotating superstructure is mounted such as a car, truck, crawlers, or wheel platform.
- Boom.** A member section of a crane or derrick, the lower end of which is affixed to a mast, base, carriage, or support, and the upper end supports a hook or other end attachment. The length of the boom shall be taken as the straight line distance between the axis of the foot pin and the axis of the end sheave pin.
- Boom Angle.** The angle between the longitudinal centerline of the boom and the horizontal. The boom longitudinal centerline is a straight line between the boom foot pin (heel pin) centerline and boom point sheave pin centerline.
- Boom Hoist.** A hoist drum and rope reeving system used to raise and lower the boom. The rope system may be all live reeving or a combination of live reeving and pendants.
- Boomstop.** A device used to limit the angle of the boom at the highest position.
- Boom-Type Excavator.** A power-operated excavating crane-type machine used for digging or moving materials. Some excavators of this type are commonly known as dipper stick shovels, backdiggers, trench hoe shovels, draglines, grab buckets, clamshell or orange peel excavators.
- Booming, Luffing or Topping.** Raising or lowering the head of a boom.
- Brake.** A device used for retarding or stopping motion by friction or power means.
- Brake (Electric).** An electric motor acting as a brake by regenerative, counter-torque, or dynamic means.
- Brake (Electrically Operated).** A friction brake actuated or controlled by electric means.
- Brake, Holding.** A brake that automatically prevents motion when all power is cut off from the brake holding mechanism.
- Bridge.** That part of a crane consisting of girders, trucks, end ties, footwalks and drive mechanism which carries the trolley or trolleys.
- Bridge Travel.** The crane movement in a direction parallel to the crane runway.
- Buffer.** A cushioning device at the ends of a trolley, bridge, or other moving part of a crane operating on rails to minimize shock in the event of collision.
- Bulk Cargo Spout.** A spout, which may or may not be telescopic and may or may not have removable sections, but is suspended over the vessel from some overhead structure by wire rope or other means. Such a spout is often used with a thrower or trimming machine. A grain loading spout is an example of spouts covered by this definition.
- Bulk Cargo Sucker.** A pneumatic conveyor which utilizes a spoutlike device, which may be adjustable vertically and/or laterally, and which is suspended over a vessel from some overhead structure by wire rope or other means. An example of an installation of this nature is the grain sucker used to discharge grain from barges.
- Bumper.** A device which stops the moving part at the limit of travel of a trolley, bridge, or crane operating on rails and prevents further motion beyond that point.
- Cab.** An inclosure for housing the operator and/or the hoisting mechanism, power plant, and equipment controlling a crane.
- Cab-Operated Crane.** A crane controlled by an operator in a cab located on the bridge or trolley.