

Heat treatment certificates shall be available for inspection. Alloy chains shall not be annealed.

(ii) Any part of a lifting appliance or item of loose gear installed after January 21, 1998 shall not be manufactured of wrought iron.

(6) Kinked or knotted chains shall not be used for lifting. Chains shall not be shortened by bolting, wiring or knotting. Makeshift links or fasteners such as wire, bolts or rods shall not be used.

(7) Hooks, rings, links and attachments affixed to sling chains shall have rated capacities at least equal to those of the chains to which they are attached.

(8) Chain slings shall bear identification of size, grade and rated capacity.

(i) *Shackles.* (1) If the manufacturers' recommended safe working loads for shackles are available, they shall not be exceeded. If the manufacturers' recommendations are not available, table 5 of appendix II to this part shall apply.

(2) Screw pin shackles provided by the employer and used aloft, except in cargo hook assemblies, shall have their pins positively secured.

(j) *Hooks other than hand hooks.* (1) The manufacturer's recommended safe working loads for hooks shall not be exceeded. Hooks other than hand hooks shall be tested before initial use in accordance with the provisions of § 1919.31 (a), (c), and (d) of this chapter. *Exception:* Manufacturers' test certificates indicating performance to the criteria in § 1919.31 (a), (c) and (d) of this chapter shall be acceptable.

(2) Bent or sprung hooks shall be discarded.

(3) Teeth of case hooks shall be maintained in safe condition.

(4) Jaws of patent clamp-type plate hooks shall be maintained in condition to grip plates securely.

(5) Loads shall be applied to the throat of the hook only.

(k) *Pallets.* (1) Pallets shall be made and maintained to support and carry loads being handled safely. Fastenings of reusable pallets used for hoisting shall be bolts and nuts, drive screws (helically threaded nails), annular threaded nails or fastenings of equivalent holding strength.

(2) Reusable wing or lip-type pallets shall be hoisted by bar bridles or other suitable gear and shall have an overhanging wing or lip of at least three inches (7.6 cm). They shall not be hoisted by wire slings alone.

(3) Loaded pallets that do not meet the requirements of this paragraph shall be hoisted only after being placed on pallets meeting such requirements, or shall be handled by other means providing equivalent safety.

(4) Bridles for handling flush end or box-type pallets shall be designed to prevent disengagement from the pallet under load.

(5) Pallets shall be stacked or placed to prevent falling, collapsing or otherwise causing a hazard under standard operating conditions.

(6) Disposable pallets intended only for one use shall not be reused for hoisting.

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§ 1918.63 Chutes, gravity conveyors and rollers.

(a) Chutes shall be of adequate length and strength to support the conditions of use, and shall be free of splinters and sharp edges.

(b) When necessary for the safety of employees, chutes shall be equipped with sideboards to afford protection from falling objects.

(c) When necessary for the safety of employees, provisions shall be made for stopping objects other than bulk commodities at the delivery end of the chute.

(d) Chutes and gravity conveyor roller sections shall be firmly placed and secured to prevent displacement, shifting, or falling.

(e) Gravity conveyors shall be of sufficient strength to support the weight of materials placed upon them safely. Conveyor rollers shall be installed in a way that prevents them from falling or jumping out of the frame.

(f) Frames shall be kept free of burrs and sharp edges.

§ 1918.64 Powered conveyors.

(a) *Emergency stop.* Readily accessible stop controls shall be provided for use in an emergency. Whenever the operation of any power conveyor requires