(2) The employer shall ensure that, before a motor vehicle is operated, any tools and materials being transported are secured if their movements may create a hazard for employees.

(3) The employer shall implement measures to ensure that motor vehicle operators are able to see, and avoid harming, pedestrians and bicyclists at shipyards. Measures that employers may implement to comply with this requirement include:

(i) Establishing dedicated travel lanes for motor vehicles, bicyclists, and pedestrians;
(ii) Installing crosswalks and traffic control devices such as stop signs, mirrors at blind spots, or physical barriers to separate travel lanes;
(iii) Establishing appropriate speed limits for all motor vehicles;
(iv) Establishing “no drive” times to allow for safe movement of pedestrians;
(v) Providing reflective vests or other gear so pedestrians and bicyclists are clearly visible to motor vehicle operators;
(vi) Ensuring that bicycles have reflectors, lights, or other equipment to maximize visibility of the bicyclist; or
(vii) Other measures that the employer can demonstrate are as effective in protecting pedestrians and bicyclists as those measures specified in paragraphs (c)(3)(i) through (c)(3)(vi) of this section.

§ 1915.112 Ropes, chains and slings.

The provisions of this section shall apply to ship repairing, shipbuilding and shipbreaking.

(a) Manila rope and manila-rope slings. Employers must ensure that manila rope and manila-rope slings:

(1) Have permanently affixed and legible identification markings as prescribed by the manufacturer that indicate the recommended safe working load for the type(s) of hitch(es) used, the angle upon which it is based, and the number of legs if more than one;

(2) Not be loaded in excess of its recommended safe working load as prescribed on the identification markings by the manufacturer; and

(3) Not be used without affixed and legible identification markings as required by paragraph (a)(1) of this section.

(b) Wire rope and wire-rope slings. (1) Employers must ensure that wire rope and wire-rope slings:

(i) Have permanently affixed and legible identification markings as prescribed by the manufacturer that indicate the recommended safe working load for the type(s) of hitch(es) used, the angle upon which it is based, and the number of legs if more than one;

(ii) Not be loaded in excess of its recommended safe working load as prescribed on the identification markings by the manufacturer; and

(3) Not be used without affixed and legible identification markings as required by paragraph (b)(1)(i) of this section.

(2) Protruding ends of strands in splices on slings and bridles shall be covered or blunted.

(3) When U-bolt wire rope clips are used to form eyes, employers must use Table G–1 in §1915.118 to determine the number and spacing of clips. Employers must apply the U-bolt so that the “U” section is in contact with the dead end of the rope.

(4) Wire rope shall not be secured by knots.
(c) **Chain and chain slings.** (1) Employers must ensure that chain and chain slings:
   (i) Have permanently affixed and legible identification markings as prescribed by the manufacturer that indicate the recommended safe working load for the type(s) of hitch(es) used, the angle upon which it is based, and the number of legs if more than one;
   (ii) Not be loaded in excess of its recommended safe working load as prescribed on the identification markings by the manufacturer; and
   (iii) Not be used without affixed and legible identification markings as required by paragraph (c)(1)(i) of this section.

(2) All sling chains, including end fastenings, shall be given a visual inspection before being used on the job. A thorough inspection of all chains in use shall be made every 3 months. Each chain shall bear an indication of the month in which it was thoroughly inspected. The thorough inspection shall include inspection for wear, defective welds, deformation and increase in length or stretch.

(3) Employers must note interlink wear, not accompanied by stretch in excess of 5 percent, and remove the chain from service when maximum allowable wear at any point of link, as indicated in Table G–2 in §1915.118, has been reached.

(4) Chain slings shall be removed from service when, due to stretch, the increase in length of a measured section exceeds five (5) percent; when a link is bent, twisted or otherwise damaged; or when raised scars or defective welds appear.

(5) All repairs to chains shall be made under qualified supervision. Links or portions of the chain found to be defective as described in paragraph (c)(4) of this section shall be replaced by links having proper dimensions and made of material similar to that of the chain. Before repaired chains are returned to service, they shall be proof tested to the proof test load recommended by the manufacturer.

(6) Wrought iron chains in constant use shall be annealed or normalized at intervals not exceeding six months when recommended by the manufacturer. The chain manufacturer shall be consulted for recommended procedures for annealing or normalizing. Alloy chains shall never be annealed.

(7) A load shall not be lifted with a chain having a kink or knot in it. A chain shall not be shortened by bolting, wiring or knotting.


§ 1915.113 Shackles and hooks.

The provisions of this section shall apply to ship repairing, shipbuilding and shipbreaking.

(a) **Shackles.** Employers must ensure that shackles:

   (1) Have permanently affixed and legible identification markings as prescribed by the manufacturer that indicate the recommended safe working load;

   (2) Not be loaded in excess of its recommended safe working load as prescribed on the identification markings by the manufacturer; and

   (3) Not be used without affixed and legible identification markings as required by paragraph (a)(1)(i) of this section.

(b) **Hooks.** (1) The manufacturer’s recommendations shall be followed in determining the safe working loads of the various sizes and types of specific and identifiable hooks. All hooks for which no applicable manufacturer’s recommendations are available shall be tested to twice the intended safe working load before they are initially put into use. The employer shall maintain and keep readily available a certification record which includes the date of such tests, the signature of the person who performed the test and an identifier for the hook which was tested.

   (2) Loads shall be applied to the throat of the hook since loading the point overstresses and bends or springs the hook.

   (3) Hooks shall be inspected periodically to see that they have not been bent by overloading. Bent or sprung hooks shall not be used.

[47 FR 16986, Apr. 20, 1982, as amended at 51 FR 34562, Sept. 29, 1986; 76 FR 33609, June 8, 2011]