

(b) In the case of untested gear which has been in use, an initial test in conformance with paragraph (a)(1) of this section shall be carried out: *Provided, however,* That existing standing rigging and wire rope will not be required to be tested but shall be thoroughly examined to ascertain its fitness for continued use in conformance with the requirements of §§ 1919.24 and 1919.25.

(c) In the case of important alterations or renewals of the machinery and gear and also after repairs due to failure of or damage to other than loose components, a test as required in paragraph (a)(1) of this section shall be carried out.

(d) If the operation in which cargo gear is engaged never utilizes more than a fraction of the safe working load rating, the owner may, at his option, have said gear certificated for, and limited in operation to, a lesser maximum safe working load: *Provided, however,* That the gear concerned is physically capable of operation at the original load rating and the load reduction is not for the purpose of avoiding correction of any deficiency.

(e) In no case shall safe working loads be increased beyond the original design limitations unless such increase is based on engineering calculations by or acceptable to the accredited certification agency, and all necessary structural changes are carried out.

§ 1919.15 Periodic tests, examinations and inspections.

After being taken into use, every hoisting machine, all fixed gear aboard vessels accessory thereto and loose gear used in connection therewith shall be tested, thoroughly examined or inspected as follows:

(a) Derricks with their winches and accessory gear, including the attachments, as a unit; and cranes and other hoisting machines with their accessory gear, as a unit, shall be tested and thoroughly examined every four years in the manner set forth in subpart E of this part.

(b) Derricks, their permanent attachments and any other fixed gear, the dismantling of which is especially difficult, shall be visually inspected every twelve months. In order to facilitate

such inspection, all derricks shall be lowered.

(c) All hoisting machines (e.g., cranes, winches, blocks, shackles, and all other accessory gear) not included in paragraph (b) of this section shall be thoroughly examined every 12 months by means of a visual examination, supplemented as necessary by other means, such as a hammer test or with electronic, ultrasonic, or other non-destructive methods, carried out as carefully as conditions permit in order to arrive at a reliable conclusion as to the safety of the parts examined. Particular attention shall be paid to the suitability for continued use of all swivels and the pins and bushings of blocks. If necessary, parts of the machines or gear shall be dismantled. If blocks are disassembled, all shell bolt nuts shall be securely locked upon re-assembly.

(d) Where a derrick or crane is mounted on a barge hull, and ballast tanks within the hull are used to facilitate use of the derrick or crane, or uncontrolled free surface may be a factor, each annual inspection or examination, as required, shall include such inspection as is necessary for the purpose of determining the integrity of any internals contributing to stability under conditions of use. The owner shall provide the accredited person with necessary information on any ballasting arrangements required.

(e) Annual inspection or examination, as required, shall include, among other things, examination of the following:

(1) Derrick heel attachment points. Heel pins may, if possible, be examined by nondestructive examination.

(2) Shrouds and stays necessary in the use of the gear, together with attachment points.

(3) Deck fittings for the securing of vangs, topping lifts, and/or preventers.

(4) Means of attachment to the hull of "A" frame or other fixed derrick or crane structure and of mobile types of equipment permanently placed aboard the barge or vessel.

(5) Clamshell buckets or other similar equipment, such as magnets, etc., used in conjunction with a derrick or crane mounted aboard a vessel, with particular attention to closing line

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wires and sheaves. The accredited person may supplement such examination by requesting any operational tests he may deem appropriate.

(6) Winch and other operating drums for excessive wear or defect.

§ 1919.16 Heat treatment.

(a) All chains (other than bridle chains attached to derricks or masts), rings, hooks, shackles, and swivels made of wrought iron, which are used in hoisting or lowering, shall be annealed in accordance with § 1919.36 at the following intervals:

(1) Half-inch and smaller chains, rings, hooks, shackles and swivels in general use, at least once every six months; and

(2) All other chains, rings, hooks, shackles, and swivels in general use, at least once every twelve months.

(3) In the case of gear used solely on lifting machinery worked by hand, twelve months shall be substituted for six months in paragraph (a)(1) of this section and two years for twelve months in paragraph (a)(2) of this section.

(4) When used in this paragraph, the term "in general use" means used on fifty-two or more days in a year. In any case, however, the period between annealings shall not exceed two years.

(b) Chains, rings, hooks, shackles, and swivels made of material other than wrought iron or steel shall be heat treated when necessary in accordance with § 1919.36(b).

§ 1919.17 Exemptions from heat treatment.

Gear made of steel, or gear which contains (as in ball bearings swivels), or is permanently attached to (as with blocks) equipment made of materials which cannot be subjected to heat treatment shall be exempt from the requirements of § 1919.16. Such gear, however, shall be thoroughly examined in the manner described in § 1919.15(c).

§ 1919.18 Grace periods.

Grace periods allowed in connection with the requirements of this subpart are as follows:

(a) Annual or six-month requirements—by the end of the voyage during which they become due;

(b) Quadrennial requirements—with- in six months after the date when due;

(c) Grace periods shall not be deemed to extend subsequent due dates.

§ 1919.19 Gear requiring welding.

Chains or other gear which have been lengthened, altered or repaired by welding shall be properly heat treated where necessary, and, before again being put into use, shall be tested and reexamined in the manner set forth in subpart E of this part.

§ 1919.20 Damaged components.

(a) Pursuant to § 1918.51(b) of this chapter, any derrick or associated permanent fitting which is deformed in service between surveys shall be subjected to proof test to determine its suitability for continued service. If a proof test indicates that the derrick or associated permanent fitting may be continued in service without repair, a note of the existing deformity shall be made on the test certificate. When, in the opinion of the accredited person, it is unsafe to conduct a proof test with an existing deformity, the derrick or associated permanent fitting shall be replaced or repaired and then subjected to proof test in accordance with subpart E of this part.

(b) Any loose gear components which are injured or deformed by a proof load shall be replaced before a certificate is issued.

(c) Any derrick, other fixed installation, or associated permanent fitting which is injured or deformed by a proof load shall be replaced or repaired and another proof load test shall be conducted without damage before a certificate is issued.

§ 1919.21 Marking and posting of safe working loads.

(a) The safe working load of the assembled gear and the minimum angle to the horizontal at which this load may be applied shall be plainly marked at the heels of all booms along with the date of the test. Where gear is certificated for use in union purchase, the union purchase safe working load shall also be plainly marked. Any limitations shall be noted in the vessel's papers.