

02-02 Pertinent OSHA Regulations Regarding the inspection of Synthetic Web Slings

Pertinent OSHA Regulations Regarding the inspection of Synthetic Web Slings

Subpart B - Gear Certification

1918.11 Gear certification.

(See also 1918.51). (a) The employer shall not use the vessel's cargo handling gear until it has been ascertained that the vessel has a current and valid cargo gear register and certificates which in form and content are in substantial accordance with the recommendations of the International Labor Office, as set forth in Appendix I of this part, and as provided by International Labor Organization Convention No. 152, and which indicates that the cargo gear has been tested, examined and heat treated by or under the supervision of persons or organizations defined as competent to make register entries and issue certificates pursuant to paragraphs (c) and (d) of this section.

Subpart F - Vessel's Cargo Handling Gear

1918.51 General requirements.

(See also 1918.11).

(b) All components of cargo handling gear, including tent gantlines and associated rigging, shall be inspected by the employer or by a designated representative of the employer before each use and at intervals during use. Any gear which is found to be unsafe shall not be used until it is made safe.

Subpart G - Cargo Handling Gear and Equipment Other Than Ships Gear

29 CFR 1918.62 (g) Synthetic web slings.

(1) Slings and nets or other combinations of more than one piece of synthetic webbing assembled and used as a single unit (synthetic web slings) shall not be used to hoist loads in excess of the sling's rated capacity.

(2) Synthetic web slings shall be removed from service if they exhibit any of the following defects:

(i) Acid or caustic burns;

(ii) Melting or charring of any part of the sling surface;

(iii) Snags, punctures, tears or cuts;

(iv) Broken or worn stitches;

(v) Distortion or damage to fittings; or (vi) Display of visible warning threads or markers designed to indicate excessive wear or damage.

(3) Defective synthetic web slings removed from service shall not be returned to service unless repaired by a sling manufacturer or an entity of similar competence. Each repaired sling shall be proof tested by the repairer to twice the sling's rated capacity prior to its return to service. The employer shall retain a certificate of the proof test and make it available for inspection.

1919.15 PERIODIC TESTS, EXAMINATIONS AND INSPECTIONS. (from SubPart D - Certification of Vessels' Cargo Gear)

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:

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 nondestructive methods, carried out as carefully as conditions permit in order to arrive at a reliable conclusion as to the safety of the parts examined.

1919.31: PROOF TESTS-LOOSE GEAR (from Subpart E - Certification of vessels: Tests and Proof Loads: Heat Treatment; Competent Persons)

(a) Chains, rings, shackles and other loose gear (whether accessory to a machine or not) shall be tested with a proof load against the article equal to that shown in the following table:

Article of gear	Proof load
Chain, ring, hook, shackle or swivel ..	100 percent in excess of the safe working load.
Blocks:	
Single sheave block	300 percent in excess of the safe working load(1).
Multiple sheave block with safe working load up to and including 20 tons	100 percent in excess of the safe working load.
Multiple sheave block with safe working load over 20 tons up to and including 40 tons	20 tons in excess of the safe working load.
Multiple sheave block with safe working load over 40 tons	50 percent in excess of the safe working load.
Pitched chains used with hand-operated blocks and rings, hooks, shackles or swivels permanently attached thereto	50 percent in excess of the safe working load.
Hand-operated blocks used with pitched chains and rings, hooks, shackles or swivels permanently attached thereto	50 percent in excess of the safe working load.

Footnote(1) The proof load applied to the block is equivalent to twice the maximum resultant load on the eye of pin of the block when lifting the nominal safe working load defined in (i) below. The proof load is, therefore, equal to four times the safe working load as defined in (i) below or twice the safe working load as defined in (ii) below.

Footnote(i) The nominal safe working load of a single-sheave block should be the maximum load which can be safely lifted by the block when the load is attached to a rope which passes around the sheave of the block.

Footnote(ii) In the case of a single-sheave block where the load is attached directly to the block instead of to a rope passing around the sheave, it is permissible to lift a load equal to twice the nominal safe working load of the block as defined in (i) above.

Footnote(iii) In the case of a lead block so situated that an acute angle cannot be formed by the two parts of the rope passing over it (i.e., the angle is always 90 degrees or more), the block need not have a greater nominal safe working load than one-half the maximum resultant load which can be placed upon it.