Slings (Steel Chain, Wire Rope & Metal Mesh)

Reset Form

Self-Inspection Checklist

Optional Information

Name of School:
Date of Inspection:
Career-Technical program/course/room:
Signature of inspector:

Guidelines:

This checklist covers regulations issued by the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) under the general industry standards 29 CFR 1910.184 and the construction standards 1926.251. It applies to slings used with other equipment to move material by lifting or hoisting. The regulations cited apply only to private employers and their employees, unless adopted by a State agency and applied to other groups such as public employees. A yes answer to a question indicates that this portion of the inspection complies with the OSHA or U.S. Environmental Protection Agency (EPA) standard, or with a nonregulatory recommendation. Definitions of terms in bold type are provided at the end of the checklist.

Questions marked with this symbol may require the help of an outside expert.

Numerous tables are included as part of 29 CFR 1910.184 and 1926.251 that relate sling configuration, sling construction, sling diameter and maximum load capacity. These tables have not be included as part of this checklist. For additional information, consult the OSHA regulations.

Alloy Steel Chain Slings		
	1	Do alloy steel chain slings have permanently affixed durable identification stating the size, grade, rated capacity, and reach? [29 CFR 1910.184(e)(1) and 1926.251(b)(1)]
	2	Do hooks, rings, oblong links, pear-shaped links, welded or mechanical coupling links, or other attachments have rated capacities at least equal to that of the alloy steel chain with which they are used? [29 CFR 1910.184(e)(2)(i) and 1926.251(b)(2)]
	3	Is the sling used at or below the rated capacity of the weakest component? [29 CFR 1910.184(e)(2)(i)]
	4	Are makeshift links or other fasteners formed from bolts or rods prohibited? [29 CFR 1910.184(e)(2)(ii) and 1926.251(b)(3)]

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Alloy Steel Chain Slings		
	5	Is a thorough inspection made of the alloy steel chain sling at least once every 12 months? [29 CFR 1910.184(e)(3)(i) and 1926.251(b)(6)(i)]
	6	Are written records kept of these inspections? [29 CFR 1910.184(e)(3)(ii) and 1926.251(b)(6)(ii)]
	7	Are thorough inspections of alloy steel chain slings performed by competent persons? [29 CFR 1910.184(e)(3)(iii)] *Note: The inspector must check for wear, defective welds, deformation, and increase in length. The OSHA construction regulations 1926.251(b)(5) require the sling be removed from service if any chain link has excessive wear. Consult the OSHA regulation for additional details.*
	8	Have new, repaired, or reconditioned alloy steel chain slings been proof tested by the manufacturer, and is a certificate of proof tested available? [29 CFR 1910.184(e)(4) and (e)(7)(i)]
	9	Are of alloy steel chain slings used with loads at or below the rated capacities? [29 CFR 1910.184(e)(5) and 1926.251(b)(4)] *Note: Consult the OSHA regulations or the manufacturer's requirements for permitted load ratings.*
	10	Are alloy steel chain slings permanently removed from service if heated above 1,000°F? [29 CFR 1910.184(e)(6)]
	11	Are maximum working loads reduced in accordance with the manufacturer's recommendations if the chain or sling is exposed to temperatures above 600°F? [29 CFR 1910(e)(6)]
	12	Is the use of mechanical coupling links or low carbon steel repair links prohibited? [29 CFR 1910.184(e)(7)(ii)]
	13	Are slings removed from service if their hooks are cracked or are opened more than 15 percent of the normal throat opening (measured at the narrowest point)? [29 CFR 1910.184(e)(9)(ii)]
	14	Are slings removed from service if their hooks are twisted more than 10 degrees from the plane of the unbent hook? [29 CFR 1910.184(e)(9)(ii)]

Wire Rope Slings		
	15	Are wire rope slings used with loads at or below their rated capacities? [29 CFR 1910.184(f)(1) and 1926.251(c)(1)] *Note: Consult the OSHA regulations or the manufacturer's requirements for permitted load ratings.*
	16	Are fiber core wire rope slings permanently removed from service if they are exposed to temperatures above 200°F? [29 CFR 1910.184(f)(3) and 1926.251(c)(14)]
	17	Are recommendations of the sling manufacturer followed when non fiber core wire rope slings are used at temperatures above 400°F or below -60°F? [29 CFR 1910.184(f)(3) and 1926.251(c)(14)]
	18	Is welding of end attachments performed before assembly of the sling? [29 CFR 1910.184(f)(4)(i) and 1926.251(c)(15)(i)]
	19	Are all welded end attachments proof tested by the manufacturer or equivalent entity at twice their rated capacity before their initial use, and is a certificate of the proof test available? [29 CFR 1910.184(f)(4)(ii) and 1926.251(c)(15)(ii)]
	20	Are wire rope slings immediately removed from service if any of the following conditions are present? [29 CFR 1910.184(f)(5) and 1926.251(c)(4)(iv)] 1. Ten randomly distributed broken wires in one rope lay, or five broken wires in one strand in one rope lay 2. Wear or scraping of one-third the original diameter of outside individual wires 3. Kinking, crushing, bird caging, or other damage resulting in distortion of the wire rope structure 4. Evidence of heat damage 5. End attachments that are cracked, deformed, or worn 6. Hooks that have been opened more than 15 percent of the normal throat opening (measured at the narrowest point), or hooks twisted more than 10 degrees from the plane of the unbent hook 7. Corrosion of the rope or end attachments
	21	Are protruding ends of strands in splices covered or blunted [29 CFR 1926.251(c)(2)]

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Metal Mesh Slings		
	22	Does each metal mesh sling have a permanently affixed durable marking that states the rated capacity for vertical basket hitch and choker hitch loading? [29 CFR 1910.184(g)(1)]
	23	Do handles have a rated capacity at least equal to the metal fabric and show no deformation after proof testing? [29 CFR 1910.184(g)(2)]
	24	When fabric and handles are joined, [29 CFR 1910.184(g)(3)] 1. Is the rated capacity of the sling the same (i.e., not reduced)? 2. Is the load is evenly distributed across the width of the fabric? 3. Is the fabric protected from sharp edges?
	25	Are slings free of coatings that diminish the rated capacity of the sling prohibited? [29 CFR 1910.184(g)(4)]
	26	Are all new and repaired metal mesh slings and handles proof tested by the manufacturer or other competent person at a minimum of one and a half times their rated capacity? Is a certificate of proof test available? [29 CFR 1910.184(g)(5)]
	27	Are metal mesh slings only used below their permitted load rated capacities? [29 CFR 1910.184(g)(6)] *Note: Consult the OSHA regulations or the manufacturer's requirements for permitted load ratings.*
	28	Are the sling manufacturer's recommendations followed concerning safe operating temperatures? [29 CFR 1910.184(g)(7)
	29	Are all repairs to metal mesh slings performed by the manufacturer or another competent person? [29 CFR 1910.184(g)(8)(i)]
	30	Once repaired, are metal mesh slings marked or tagged, or are written records maintained to indicate the date and nature of the repair and the person or organization that performed the repairs? [29 CFR 1910.184(g)(8)(ii)]
	31	Are metal mesh slings immediately removed from service if any of the following conditions are present? [29 CFR 1910.184(g)(9)] 1. Broken weld or brazed joint is broken along the sling edge [29 CFR 1910.184(g)(9)(i)] 2. Twenty-five percent reduction in wire diameter due to abrasion, or 15% reduction due to corrosion [29 CFR 1910.184(g)(9)(ii)] 3. Lack of flexibility due to distortion of the fabric [29 CFR 1910.184(g)(9)(iii)] 4. Distortion of the female handle so that the depth of the slot is increased more than 10 percent [29 CFR 1910.184(g)(9)(iv)] 5. Distortion of either handle so that the width of the eye is decreased more than 10 degrees [29 CFR 1910.184(g)(9)(v)] 6. A 15 reduction of the original cross sectional areas of metal at any point around the handle eye [29 CFR 1910.184(g)(9)(vi)] 7. Distortion of either handle out of its plane [29 CFR 1910.184(g)(9)(vii)]

Definitions

Cleat: a ladder crosspiece of rectangular cross section placed on edge. A person steps on a cleat while ascending or descending a ladder. [29 CFR 1926.1050(b)]

Extension trestle ladder: a self-supporting portable ladder, adjustable in length, consisting of a trestle ladder base and a vertically adjustable extension section, with a suitable means for locking the ladders together.

Portable ladder: a ladder that can be readily moved or carried.

Step stool (ladder type): a self-supporting, foldable, portable ladder, nonadjustable in length, 32 inches or less in overall size, with flat steps and without a pail shelf, designed to be climbed on the ladder top cap as well as all steps. The side rails may continue above the top cap.