

Optional Information

Name of School:

Date of Inspection:

Vocational Program/Course/Room:

Signature of Inspector:

**Slings – Steel Chain, Wire Rope and Metal Mesh
Self Inspection Checklist**

Guidelines: This checklist covers part of the regulations issued by the U.S. Department of Labor - OSHA under the General Industry standards 29 CFR 1910.184 and the Construction standards 1926.251. All of these regulations were adopted by reference. It applies to *slings* used in conjunction with other material handling equipment to move material by lifting or hoisting. Definitions are provided at the end of the checklist to help you understand some of the questions. Questions marked with the symbol (☞) may require the help of an outside expert.

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

Alloy Steel Chain Slings

Please Circle

1. Do alloy steel chain *slings* have permanently affixed durable identification stating the size, grade, rated capacity and reach? [29 CFR 1910.184(e) and 1926.251(b)(1)] Y N N/A DK

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| 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) and 1926.251(b)(2)] | Y N N/A DK |
| 3.☞ | Is the <i>sling</i> not used in excess of the rated capacity of the weakest component? [29 CFR 1910.184(e)(2)] | Y N N/A DK |
| 4. | Is the use of makeshift links or other fasteners formed from bolts or rods prohibited? [29 CFR 1910.184(e)(2)(ii) and 1926.251(b)(3)] | Y N N/A DK |
| 5.☞ | Is a thorough inspection made of the alloy steel chain <i>slings</i> at least once every twelve months? [29 CFR 1910.184(e)(3)(i)] | Y N N/A DK |
| 6. | Are written records kept of the inspections of alloy steel chain <i>slings</i> ? [29 CFR 1910.184(e)(3)(ii)] | Y N N/A DK |
| 7.☞ | Are thorough inspections of alloy steel chain <i>slings</i> performed by competent persons? The inspection must include inspection for wear, defective welds, deformation and increase in length. [29 CFR 1910.184(e)(3)(iii)] | Y N N/A DK |
| 8. | Have new, repaired or reconditioned alloy steel chain <i>slings</i> been <i>proof tested</i> by the manufacturer and is a certificate of <i>proof test</i> available? [29 CFR 1910.184(e)(4)] | Y N N/A DK |
| 9.☞ | Is use of alloy steel chain <i>slings</i> in excess of the rated capacities prohibited? [29 CFR 1910.184(e)(5) and 1926.251(b)(4)] | Y N N/A DK |

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| 10. | Are alloy steel chain <i>slings</i> permanently removed from service if heated above 1000° F? [29 CFR 1910.184(e)(5)] | Y N N/A DK |
| 11. | Are maximum working loads reduced in accordance with the manufacturer's recommendations if the chain or <i>sling</i> is exposed to temperatures in excess of 600° F? [29 CFR 1910(e)(5)] | Y N N/A DK |
| 12. | Have repaired and reconditioned alloy steel chain <i>slings</i> been <i>proof tested</i> by the <i>sling</i> manufacturer or an equivalent entity? [29 CFR 1910.184(e)(7)] | Y N N/A DK |
| 13. | Is the use of mechanical coupling links or low carbon steel repair links prohibited? [29 CFR 1910.184(e)(7)(ii)] | Y N N/A DK |
| 14. | Are <i>slings</i> removed from service if their hooks are cracked or have opened more than 15 percent of the normal throat opening (measured at the narrowest point)? [29 CFR 1910.184(e)(9)(ii)] | Y N N/A DK |
| 15. | Are <i>slings</i> 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)] | Y N N/A DK |

Wire Rope Slings

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| 16. ☞ | Are wire rope <i>slings</i> prohibited to be used in excess of their rated capacities? [29 CFR 1910.184(f)(1) and 1926.251(c)(1)] | Y N N/A DK |
| 17. | Are fiber core wire rope <i>slings</i> permanently removed from service if they are exposed to temperatures in excess of 200° F? [29 CFR 1910.184(f)(3)] | Y N N/A DK |

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| 18. | Are recommendations of the <i>sling</i> manufacturer followed when nonfiber core wire rope <i>slings</i> are used at temperatures above 400° F or below minus 60° F? [29 CFR 1910.184(f)(3)] | Y | N | N/A | DK |
| 19. | Is welding of end attachments performed prior to the assembly of the <i>sling</i> ? [29 CFR 1910.184(f)(4)(i)] | Y | N | N/A | DK |
| 20. | Are all welded end attachments <i>proof tested</i> by the manufacturer or equivalent entity at twice their rated capacity prior to their initial use and is a certificate of <i>proof test</i> available? [29 CFR 1910.184(f)(4)(ii)] | Y | N | N/A | DK |
| 21. | Are wire rope <i>slings</i> immediately removed from service if any of the following conditions are present: [29 CFR 1910.184(f)(5) and 1926.251(c)(4)(iv)] | | | | |
| | (i) Ten randomly distributed broken wires in one rope lay, or five broken wires in one strand in one rope lay? | Y | N | N/A | DK |
| | (ii) Wear or scraping of one-third the original diameter of outside individual wires? | Y | N | N/A | DK |
| | (iii) Kinking, crushing, bird caging or other damage resulting in distortion of the wire rope structure? | Y | N | N/A | DK |
| | (iv) Evidence of heat damage? | Y | N | N/A | DK |
| | (v) End attachments that are cracked, deformed or worn? | Y | N | N/A | DK |

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| (vi) | 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? | Y | N | N/A | DK |
| (vii) | Corrosion of the rope or end attachments? | Y | N | N/A | DK |
| 22. | Are protruding ends of strands in splices covered or blunted? [29 CFR 1926.251(c)(2)] | Y | N | N/A | DK |

Metal Mesh Slings

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| 23. | Does each metal mesh <i>sling</i> 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)] | Y | N | N/A | DK |
| 24. | Do <i>handles</i> have a rated capacity at least equal to the metal fabric and exhibit no deformation after <i>proof testing</i> ? [29 CFR 1910.184(g)(2)] | Y | N | N/A | DK |
| 25. | Are fabric and <i>handles</i> joined so that: [29 CFR 1910.184(g)(3)] | | | | |
| (i) | The rated capacity of the <i>sling</i> is not reduced? | Y | N | N/A | DK |
| (ii) | The load is evenly distributed across the width of the fabric? | Y | N | N/A | DK |
| (iii) | Sharp edges will not damage the fabric? | Y | N | N/A | DK |

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| 26. | Is the use of coatings which diminish the rated capacity of the <i>sling</i> prohibited? [29 CFR 1910.184(g)(4)] | Y | N | N/A | DK |
| 27. | Are all new and repaired metal mesh <i>slings</i> and <i>handles</i> <i>proof tested</i> by the manufacturer or equivalent entity at a minimum of one and a half times their rated capacity and is a certificate of <i>proof test</i> available? [29 CFR 1910.184(g)(5)] | Y | N | N/A | DK |
| 28. ☞ | Are metal mesh <i>slings</i> permitted to be used in excess of their rated capacities? [29 CFR 1910.184(g)(6)] | Y | N | N/A | DK |
| 29. | Are the <i>sling</i> manufacturer's recommendations followed concerning safe operating temperatures? [29 CFR 1910.184(g)(7)] | Y | N | N/A | DK |
| 30. | Are all repairs to metal mesh <i>slings</i> performed by the manufacturer or equivalent entity? [29 CFR 1910.184(g)(8)(i)] | Y | N | N/A | DK |
| 31. | Once repaired, are metal mesh <i>slings</i> 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)] | Y | N | N/A | DK |
| 32. | Are metal mesh <i>slings</i> immediately removed from service if any of the following conditions are present: [29 CFR 1910.184(g)(9)] | | | | |
| | (i) The weld or brazed joint is broken along the <i>sling</i> edge? | Y | N | N/A | DK |
| | (ii) Reduction in wire diameter of 25 percent due to abrasion or 15 percent due to corrosion? | Y | N | N/A | DK |

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(iii)	Lack of flexibility due to distortion of the fabric?	Y	N	N/A	DK
(iv)	Distortion of the female <i>handle</i> so that the depth of the slot is increased more than 10 percent?	Y	N	N/A	DK
(v)	Distortion of either <i>handle</i> so that the width of the eye is decreased more than 10 percent?	Y	N	N/A	DK
(vi)	A 15 percent reduction of the original cross sectional areas of metal at any point around the <i>handle</i> eye?	Y	N	N/A	DK
(vii)	Distortion of either <i>handle</i> out of its plane?	Y	N	N/A	DK

Definitions:

Handle is a terminal fitting to which metal mesh fabric is attached.

Proof Test means a nondestructive tension test performed by the sling manufacturer or an equivalent entity to verify construction and workmanship of a sling.

Sling means an assembly which connects the load to the material handling equipment.

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