

## **GENERAL REQUIREMENTS AND INSPECTION CRITERIA FOR SLINGS**

**SAFE OPERATING PRACTICES (OSHA 1910.184)** - Whenever any sling is used the following practices shall be observed:

1. Slings that are damaged or defective shall not be used.
2. Slings shall not be shortened with knots or bolts or other makeshift devices.
3. Sling legs shall not be kinked.
4. Slings shall not be loaded in excess of their rated capacities.
5. Slings used in a basket hitch shall have the loads balanced to prevent slippage.
6. Slings shall be securely attached to their loads.
7. Slings shall be padded or protected from the sharp edges of their loads.
8. Suspended loads shall be kept clear of all obstructions.
9. All employees shall be kept clear of loads about to be lifted and of suspended loads.
10. Hands or fingers shall not be placed between the sling and its load while the sling is being tightened around the load.
11. Shock loading is prohibited.
12. A sling shall not be pulled from under a load when the load is resting on the sling.
13. Employers must not load a sling in excess of its recommended safe working load as prescribed by the sling manufacturer on the identification markings permanently affixed to the sling.
14. Employers must not use slings without affixed and legible identification markings.

**INSPECTIONS** - Each day before being used, the sling and all fastenings and attachments shall be inspected for damage or defects by a competent person designated by the employer. Additional inspections shall be performed during sling use where service conditions warrant. Damaged or defective slings shall be immediately removed from service.

### **REMOVAL CRITERIA**

**WIRE ROPE SLINGS (ASME B30.9)** - A wire rope sling shall be removed from service if conditions such as the following are present:

1. Missing or illegible sling identification.
2. Broken Wires:
  - \*For strand-laid and single-part slings, 10 randomly distributed broken wires in one rope lay, or 5 broken wires in one strand in one rope lay.
  - \*For cable-laid slings, 20 broken wires per lay.
  - \*For less than eight-part braided slings, 20 broken wires per braid length.
  - \*For eight-part or more than eight braided slings, 40 broken wires per braid length.
3. Severe localized abrasion or scraping resulting in a reduction from nominal diameter of more than 5%.
4. Kinking, crushing, birdcaging, or any other damage resulting in damage to the rope structure.
5. Evidence of heat damage.
6. Fittings that are cracked, deformed, or worn to the extent that the strength of the sling is substantially affected.
7. Severe corrosion of the rope or fittings.
8. For hooks, removal criteria as stated in ASME B30.10.
9. For rigging hardware, removal criteria as stated in ASME B30.26
10. Other conditions, including visible damage, that cause doubt as to the continued use of the sling.

**NYLON WEB SLINGS (ASME B30.9)** - A synthetic webbing sling shall be removed from service if conditions such as the following are present:

1. Missing or illegible sling identification.
2. Acid or caustic burns.
3. Melting or charring of any part of the sling.
4. Holes, tears, cuts, or snags.
5. Broken or worn stitching in load bearing splices.
6. Excessive abrasive wear.
7. Knots in any part of the sling.
8. Discoloration and brittle or stiff areas on any part of the sling, which may mean chemical or ultraviolet/sunlight damage.
9. Fittings that are pitted, corroded, cracked, bent, twisted, gouged, or broken.
10. For hooks, removal criteria as stated in ASME B30.10.
11. For rigging hardware, removal criteria as stated in ASME B30.26
12. Other conditions, including visible damage, that cause doubt as to the continued use of the sling.

## **REMOVAL CRITERIA**

**POLYESTER ROUND SLINGS (ASME B30.9)** - A synthetic roundsling shall be removed from service if conditions such as the following are present:

1. Missing or illegible sling identification.
2. Acid or caustic burns.
3. Evidence of heat damage.
4. Holes, tears, cuts, abrasive wear, or snags that expose the core yarns.
5. Broken or damaged core yarns.
6. Weld splatter that exposes core yarns.
7. Knots in the roundslings, except for core yarns inside the cover.
8. Fittings that are pitted, corroded, cracked, bent, twisted, gouged, or broken.
9. For hooks, removal criteria as stated in ASME B30.10.
10. For rigging hardware, removal criteria as stated in ASME B30.26.
11. Other conditions, including visible damage, that may cause doubt as to the continued use of the sling.

**ALLOY STEEL CHAIN SLINGS (ASME B30.9)** - An alloy steel chain sling shall be removed from service if conditions such as the following are present:

1. Missing or illegible sling identification.
2. Cracks or breaks.
3. Excessive wear, nicks, or gouges. Minimum thickness on chain links shall not be below the values listed in table 9-1.9.5-1
4. Stretched chain links or fittings.
5. Bent, twisted, or deformed chain links or fittings.
6. Evidence of heat damage.
7. Excessive pitting or corrosion.
8. Lack of ability of chain or components to hinge (articulate) freely.
9. Weld splatter.
10. For hooks, removal criteria as stated in ASME B30.10.
11. For rigging hardware, removal criteria as stated in ASME B30.26
12. Other conditions, including visible damage, that cause doubt as to the continued use of the sling.

**WIRE MESH SLINGS (ASME B30.9)** - A metal mesh sling shall be removed from service if conditions such as the following are present:

1. Missing or illegible sling identification.
2. Broken weld or a broken brazed joint along the sling edge.
3. Broken wire in any part of the mesh.
4. Reduction in wire diameter of 25% due to abrasion or 15% due to corrosion.
5. Lack of flexibility due to distortion of the mesh.
6. Distortion of the choker fitting so the depth of the slot is increased by more than 10%.
7. Distortion of either end fitting so the width of the eye opening is decreased by more than 10%.
8. A 15% reduction of the original cross-sectional area of any point around the hook opening of the end fitting.
9. Visible distortion of either end fitting out of its plane.
10. Cracked end fitting.
11. Slings in which the spirals are locked or without free articulation shall not be used.
12. Fittings that are pitted, corroded, cracked, bent, twisted, gouged, or broken.
13. Other conditions, including visible damage, that cause doubt as to the continued use of the sling.

**For additional information, please refer to the OSHA and ASME standards as they may apply. It is not intended, nor should it be construed, that the information contained herein takes precedence over any regulations and requirements, local, state, federal, OEM or any other ruling body.**

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