

Revision No. 3	05/2005	Page 1 of 2
Kennecott Utah Copper Corporation Safety and Health Standards		Standard No.: 16.6 Slings

16.6.1 **PURPOSE**

16.6.1.1 This standard describes the storage and inspection guidelines that must be followed for chokers and slings.

16.6.2 **REQUIREMENTS**

16.6.2.1A register of rigging attachments and lifting slings must be established. (See Safety and Health Standard 16.4)

16.6.2.2 All slings shall be inspected by a person specifically certified to perform this work annually. Inspections and repairs to cables and lifting equipment must comply with the manufacturer's specifications and regulatory requirements as a minimum. A tag will be attached to the sling indicating the annual inspection has been completed.

- o Employee(s) using wire rope shall be responsible for inspecting, on a daily basis before each use, all slings, chokers, fastening, and attachments for damage, wear, or defects. Damaged, defective, or worn equipment must be **IMMEDIATELY** REMOVED FROM SERVICE AND PROPERLY DISPOSED OF.
- o A sling will also be inspected after any unusual situation that may have damaged it, such as overload, accident, or fire. It should not be placed back in service until its continued safe use has been verified.

16.6.2.3 Wire rope slings shall be removed from service if any of the following conditions are present:

- o Ten randomly distributed broken wires in one rope lay, or five broken wires in one strand lay. Snagged, nicked, or severely bent wires count as broken wires.
- o Wear or scraping of 30% of the original diameter of the outside individual wires.
- o Kinking, crushing, birdcaging, or any other damage resulting in distortion of the wire rope structure.
- o Evidence of heat damage.
- o Any marked reduction in diameter either along the entire main length or in one section.
- o More than one broken wire in the vicinity of a zinc and/or swaged fitting.

16.6.2.4 Slings must be removed from service if hooks are cracked, have been opened more than 15% of the normal throat opening (measured at the narrowest point) or twisted more than 10 degrees from the plane of the unbent hook. (Normal opening is the designed throat opening dimension.)

References: MSHA 30 CFR Subpart M and O. OSHA 29 CFR 1910.184 Safety and Health Standard 16.4 Cranes and Hoists Safety and Health Standard 16.20 Fall Protection (Working at Heights)					
Signatures					
Original signed by: Frank Klobchar	06/16/05	Original signed by: Chris Crowl	06/16/05	Original signed by: Bill Champion	06/16/05
Standards Committee Chairman	Date	Vice President Human Resources.	Date	President, KUCC	Date

- 16.6.2.5 Wire rope or synthetic slings that are removed from service due to defects shall be tagged out of service and given to the supervisor. The supervisor will send them in for repair and recertification or have them destroyed if repair is not practical.
- 16.6.2.6 Slings must be used in accordance with the rated capacity as shown on the sling collar or tag. When purchasing, the rated capacity is to be specified and stamped on the collar or attached tag.
- Slings must not be shortened with knots or bolts or other makeshift devices.
 - Eyes in wire rope slings must not be formed by using knots or wire rope clips.
 - Sling legs must not be kinked.
 - Slings must be protected or padded to prevent contact with sharp edges of loads (look for cuts or damage).
 - Slings must not be pulled from under loads when the load is resting on the sling.
 - Shock loading is prohibited.
 - All lifting hooks (except for grab and chain shortening hooks) will be fitted with a safety latch to prevent the load from accidentally detaching, unless otherwise specified in a risk assessment.
- 16.6.2.7A procedure must be in place to prevent the use of lifting or rigging equipment in lifting operations if such equipment has been used for towing. All such equipment that has been designated for towing must be tagged as such.
- 16.6.2.8 Bridles and associated rigging for attaching the manbasket to the hoist line may be used only for the manbasket and are not to be used for any other purpose when not hoisting personnel (See Safety and Health Standard 16.20).
- 16.6.2.9 Synthetic web slings:
- Each sling must be marked or coded to show the rated capacities for each type of hitch and synthetic web material (look for the marking).
 - Nylon web slings must not be used where fumes, vapors, spray, mists, or liquids of acids or phenolics are present.
 - Polyester and polypropylene web slings must not be used where fumes, vapors, sprays, mists, or liquids of caustics are present. Inspect for signs of damage.
 - Synthetic web slings must not be used to lift where sharp metal edges are present. Blocking must be used to prevent the sling from contacting the metal edges.
- 16.6.2.10 Synthetic webbing slings with one or more of the following visible defects shall be removed from service.
- Acid or caustic burns.
 - Melting or charring of any part of the surface.
 - Snags, punctures, tears, or cuts.
 - Broken or worn stitches that expose the warning cords.
 - Wear or elongation exceeding the amount recommended by the manufacturer.
 - Distortion of fittings.
 - Frozen slings or slings subjected to temperatures below minus 20°F or above 180°F shall be removed from service or have capacities reduced in accordance with manufacturer's requirements.
 - Load rating tag is obscured or missing.
- 16.6.2.11 All Slings must be stored in a manner that will protect them from damage by moisture, heat, corrosion, or physical abuse.