



Slings & Rigging

Slings and rigging hardware play an undeniably important role on our construction sites. Lifting and moving heavy loads is critical to ongoing operations that are performed regularly.

ISSUES:

More often than not, rigging accidents are the consequence of avoidable human error.

Common Causes of Construction Rigging Failures:

1. Skipping equipment inspections.
2. Not knowing the capacities of the slings (if a label is not legible or a tag is missing).
3. Not knowing the weight of the load.
4. Being unaware of proper rigging configurations.
5. Failure to ensure sling protection.
6. Ignoring load control.
7. Not safeguarding against electrical contact.
8. Not training workers in safe equipment use.
9. Not storing slings in appropriate areas with proper protection from weather and abrasion.

Common Causes of Construction Rigging Failures:

1. **Property Damage:** Rigging failures can cause extensive damage to buildings, materials, and equipment.
2. **Injuries and Fatalities:** Workers can suffer struck-by and caught-between injuries from rigging failures.
3. **Project Delays:** A rigging failure can shut down a job for days or even weeks until proper investigations are completed.
4. **Legal and Financial Repercussions:** Contractors and property owners may face legal and financial liabilities if failed loads strike equipment or other non-employee persons.

REGULATIONS:

OSHA Standard Subpart H – 1926.251(a)(1): Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during its use to ensure that it is safe. Rigging equipment shall be removed from service if not safe.

OSHA Standard Subpart H – 1926.251(a)(2): Employers must ensure that rigging equipment is safe and:

- (i) Has permanently affixed and legible identification markings as prescribed by the manufacturer indicating the recommended safe working load and configurations.
- (ii) Is not loaded in excess of its recommended safe working load.
- (iii) Is not used without the required identification markings.

OSHA Standard Subpart H – 1926.251(a)(3): Rigging equipment, when not in use, shall be removed from the immediate work area to avoid hazards.

OSHA Standard Subpart H – 1926.251(a)(4): Special custom design grabs, hooks, clamps, or other lifting accessories shall be marked to indicate the safe working loads and proof-tested prior to use to 125% of their rated load.

OSHA Standard Subpart H – 1926.251(a)(5): This section applies to slings used with material handling equipment for the movement of material by hoisting. Covered sling types include alloy steel chain, wire rope, metal mesh, natural or synthetic fiber rope, and synthetic web slings. Use the “right” sling for conditions.

OSHA Standard Subpart H – 1926.251(a)(6): Each day before use, the sling and all attachments shall be inspected for damage or defects by a competent person.

QUANDEL IS COMMITTED TO OUR NUMBER ONE CORE VALUE:
SAFETY: FIRST. LAST. ALWAYS!

Additional inspections shall be performed during use where conditions warrant. Damaged or defective slings shall be removed from service immediately.

REGULATIONS:

1. **March 15, 2008** – A New York crane collapse killed seven people. Broken synthetic slings, believed to be overloaded, were found at the scene.
2. **June 17, 2015** – Synthetic slings were at fault in 87% of sling-related accidents; 80% were from cut slings.
3. **January 2025** – A cut sling caused a dropped load accident in Manhattan.
4. **January 11, 2000** – A 24-year-old worker died after steel beams fell when nylon slings failed.
5. **March 2020** – A wire rope sling broke due to excessive load and shearing from rebar.
6. **June 24, 2015** – Ten people were injured when a load fell after a synthetic sling was cut.

WHAT YOU NEED TO KNOW:

1. **March 15, 2008** – **SELECTION:** Choose the appropriate sling for the load and hoisting mechanism.
2. **Inspections:** Look for frayed edges, cuts, burns, broken wires, missing tags, or other damage. Never use a damaged sling.
3. **Positioning:** Ensure the sling is evenly distributed and protected from sharp edges.
4. **Attachments:** Secure hooks or loops to the hoisting mechanism so the load is balanced.
5. **Testing Loads:** Make a test lift to confirm security.
6. **Lifting Loads:** Keep the load level and stable.
7. **Moving Loads:** Use tag lines when needed for safe clearance.
8. **Placing & Lowering Loads:** Lower slowly and avoid crushing the sling.
9. **Disconnecting Loads:** Remove the sling carefully and store it properly
10. **Research to Do It Right:** Follow manufacturer guidelines and ensure inexperienced workers are supervised.

IMPORTANT DO'S:

1. Inspect slings regularly for all labels and tags
2. Consider environmental factors such as heat, sharp edges, and chemical exposure.
3. Ensure no sling damage is present.
4. Store slings properly to avoid heat, sunlight, and mechanical damage.
5. Minimize twisting and spinning of the load.
6. Test all lifts before full lifting operations.
7. Use STOP WORK authority if safety concerns arise
8. Stand clear of the load and be alert to hazards from falling or moving loads.

IMPORTANT DON'TS:

1. Don't use slings with missing or unreadable tags
2. Don't allow sudden jerks or rapid slack take-up
3. Don't ignore environmental hazards like wind, ice, or electrical exposure.
4. Don't abuse slings.
5. Don't drag loads over slings.
6. Don't use slings with knots.
7. Don't tie two slings together.
8. Don't allow unqualified riggers to handle loads.

Occupational Safety and Health Administration. Rigging Equipment for Material Handling. OSHA Standard 1926.251, U.S. Department of Labor, www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.251. Accessed 12 Aug. 2025.

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"Wire Rope Sling Failure Investigation Report." Safety Engineering Review, Mar. 2020.

OUR PURPOSE

Lead. Make a difference. Build a better future!

OUR VALUES

Safety: First. Last. Always!

Steadfast Integrity: Be honest. Treat other with respect.

Exceptional Service: Align goals. Add value. Develop lasting relationships.

Commitment to Excellence: Take ownership. Constantly improve.

Focus on Team: Listen. Collaborate. Communicate. Execute.

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