



# COUNTY OF NORTHERN LIGHTS

## POLICY

### RIGGING

CREATED: 2/9/2025

REVISED:

TOTAL PAGES: 5

## PURPOSE

This program outlines the procedures for safe operations and the training requirements regarding rigging equipment.

## SCOPE

This program applies to all workers, temporary workers and any contractors. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers company workers and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

## KEY RESPONSIBILITIES

### Managers and Supervisors

- Are responsible to ensure that workers and contractors are trained and qualified on the proper operations and have been trained in rigging safety by a competent person. Modifications or additions which affect the safe operation of the equipment may only be made with the manufacturer's written approval.
- Are responsible to see that all provisions of this program are followed and that rigging inspections are performed and the equipment is in safe operating condition.

### Employees

- Employees are responsible to follow the requirements of this program and report any damage or needed repairs immediately to their supervisor.

## PROCEDURE

### General

All rigging work shall be assembled, used, maintained, and dismantled under the direct supervision of a competent and qualified workers trained in safe rigging practices, in accordance with manufacturer's specifications and with the code of signals authorized by local regulatory guidelines for controlling hoisting operations

## RIGGING BREAKING STRENGTH AND LOAD RATING

- Management may use a dedicated rigging assembly designed and certified for a particular lift or project by a professional engineer but the dedicated rigging assembly must be re-rated before it is used for another lift or project.
- The rigger must be aware of the capacity of the rigging equipment and ensure that it is not exceeded.
- The safe working load must be clearly marked on rigging equipment. Management must ensure that the maximum load rating of the rigging, as determined by the rigging manufacturer or a professional engineer, is legibly and conspicuously marked on the rigging. If it is not practicable to mark the rigging, Management must ensure the maximum load rating of the rigging is available to the workers at the work site.
- The rated capacity of rigging equipment must not be exceeded. Management must ensure that rigging is not subjected to a load of more than:



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- 10 percent of the breaking strength of the weakest part of the rigging, if a worker is being raised or lowered,
- 20 percent of the ultimate breaking strength of the weakest part of the rigging, and
- If the rigging is fatigue rated and a worker is not being raised or lowered, the maximum load must not exceed 25 percent of the ultimate breaking strength.
- Management may use a dedicated rigging assembly designed and certified for a particular lift or project by a professional engineer but the dedicated rigging assembly must be re-rated before it is used for another lift or project.
- Management must ensure that the maximum load rating of the rigging as determined by the rigging manufacturer or a professional engineer is legibly and conspicuously marked on the rigging. If it is not practicable to mark the rigging, Management must ensure the maximum load rating of the rigging is available to the workers at the work site.

### RIGGING INSPECTION AND REJECTION CRITERIA

Pre-use inspections are completed before rigging is used. Management must ensure that rigging to be used during a work shift is inspected thoroughly prior to each period of continuous use during the shift to ensure that the rigging is functional and safe.

Defective equipment must be removed from service. Management must ensure that a sling is permanently removed from service if it is damaged or worn. Management must ensure that a worn, damaged or deformed hook is permanently removed from service if the wear or damage exceeds the specifications allowed by the manufacturer. See *Sections 305-309 of the AB OHS Code* for specific rejection criteria.

See below inspection requirements or rejection criteria.

#### Rigging

All rigging must meet ASME standards. Management must ensure that wire rope, alloy steel chain, synthetic fibre rope, metal mesh slings and synthetic fibre slings meet the requirements of ASME Standard B30.9-2006, Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks and Slings (or current version). Management must ensure that below-the-hook lifting devices, other than slings, meet the requirements of ASME Standard B30.20-2006, Below the Hook Lifting Devices (or current version).

#### Slings

- Management must ensure that a sling is permanently removed from service if it is damaged or worn.
- A wire rope sling with a swaged or poured socket or a pressed fitting must be permanently identified with its working load limit, the angle upon which the WLL is based and the name or mark of the sling manufacturer.
- An alloy steel chain sling must be permanently identified with the size, the manufacturer's grade, and the WLL, the length and number of legs, and the name or mark of the sling manufacturer.
- Synthetic fibre web slings must be permanently identified with the manufacturer's name or mark, manufacturer's code or stock number, working load limits for the types of hitches permitted, and type of synthetic web material or be removed from service if any of these requirements are not met.
- A sling shall be permanently removed from service if it is damaged or worn.
- All slings are to be clearly labelled to indicate the slings maximum load or the slings maximum load is made readily available to workers.
- A sling must be stored to prevent damage when not in use.
- A sling with a knot must not be used.
- When a sling is applied to a sharp edge of a load, the edge or the sling must be protected to prevent damage to the sling.



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#### Hooks

- Management must ensure that a worn, damaged, or deformed hook is permanently removed from service if the wear or damage exceeds the specifications allowed by the manufacturer.
- A synthetic fibre web sling, worn or damaged hook must be permanently and immediately removed from service and Management shall not require or permit a worker to use a hook that is worn, damaged, deformed, cracked or otherwise defective or where the throat opening, measured at the narrowest point, has been increased or the tip has been bent more than 10% out of plane from the hook body, or any dimension of the hook has been decreased by 10% or any damage exceeds any criteria specified by the manufacturer.
- Hooks have safety latches. Management must ensure that a hook has a safety latch, moussing, or shackle if the hook could cause injury if it is dislodged while in use.
- All hooks shall be clearly labelled with the maximum load of the hook in a location where a worker using the hook can easily see the rating or the hooks maximum load is made readily available to workers.
- Hooks have safety latches. Hoisting hooks must be equipped with a safety latch.

All devices shall be visually inspected prior to use and removed from service for any of the following conditions:

- Nylon slings with:
  - Abnormal wear.
  - Torn stitching.
  - Broken or cut fibers.
  - Discoloration or deterioration.
- Wire rope slings with:
  - Kinking, crushing, bird caging, or other distortions.
  - Evidence of heat damage.
  - Cracks, deformation, or worn end attachments.
  - Hooks opened more than 10% at the throat.
  - Hooks twisted sideways more than 10 degrees from the plane of the unbent hook.
- Alloy steel chain slings with:
  - Cracked, bent, or elongated links or components.
  - Cracked hooks.
  - Shackles, eye bolts, turnbuckles, or other components that is damaged or deformed.

#### OPERATIONAL PROCEDURES

- Loads to be unhooked by a worker must be safely landed and supported before the rigging is detached.
- Except as otherwise specified by this program or other local regulatory requirements, the maximum rated load of chains, attachments and other rigging equipment shall be warranted by the manufacturer of the equipment, or by a professional engineer, or by other persons whose qualifications are acceptable to the designated local governmental official or department.
- All slings used to hoist a load and the slings fittings and attachments must be in compliance with legislated standards and capable of supporting at least 10 times the load to which the slings fittings, and attachments may be subjected where they are used to support a worker, and at least five times the maximum load to which they may be subjected in any other case.
- No shackles shall be subjected to a load greater than the maximum load indicated on the shackle, and all shackle pins are installed to prevent accidental withdrawal, and a bolt is never used in the place of a properly fitted shackle pin.
- All hooks shall have a safety latch, moussing, or shackle if the hook could cause injury if it is dislodged while in use.



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- Where a worker may be endangered by the rotation or motion of a load during hoisting one or more tag lines must be used to control the rotation or motion of the load and the tag lines will be of sufficient length to protect the workers from any overhead hazard and the tag lines are not removed from the load until the load is securely landed.

#### RIGGING A LOAD

- Determine the weight of the load - do not guess.
- Determine the proper size for slings and components.
- Do not use manila rope for rigging.
- Ensure that shackle pins and shouldered eyebolts are installed in accordance with the manufacturer's recommendations.
- Ensure that ordinary (shoulder-less) eyebolts are threaded in at least 1.5 times the bolt diameter.
- Use safety hoist rings (swivel eyes) as a preferred substitute for eye bolts wherever possible.
- Pad sharp edges to protect slings.
- Remember that machinery foundations or angle-iron edges may not feel sharp to the touch but could cut into rigging when under several tons of load.
- Wood, tire rubber, or other pliable materials may be suitable for padding.
- Do not use slings, eyebolts, shackles, or hooks that have been cut, welded, or brazed.
- Install wire-rope clips with the base only on the live end and the U-bolt only on the dead end.
- Follow the manufacturer's recommendations for the spacing for each specific wire size.
- Determine the center of gravity and balance the load before moving it.
- Initially lift the load only a few inches to test the rigging and balance.

#### SIGNALLING

Signals to the operator shall be in accordance with the standard hand signals prescribed by the applicable standard for the type of equipment. Specific requirements include:

- Each movement of equipment shall be proceeded by distinctive signals clearly discernible to all workers endangered by the movement and clearly distinguishable by the operator of the equipment controlled, and a signal which is not understood clearly by the operator of equipment shall be acted upon by him or her as though it were a stop signal.
- A worker shall not cause a signal to be given for the movement of equipment unless he or she has ensured that he or she and all workers within the area for which he or she is responsible are not endangered by the movement.
- Only a designated worker shall cause a signal to be given for the movement of equipment, but workers may cause a stop signal to be given and this signal shall be obeyed promptly and without question.
- A worker designated to direct the movement of equipment shall not be otherwise occupied while the equipment is in motion and he or she shall be prepared to signal to stop during the motion.
- A signalling device that functions unreliably or in a way that might constitute a hazard to a worker shall be removed from service immediately.
- Signals shall be discernible or audible at all times.
- Some special operations may require addition to or modification of the basic signals.
- For all such cases, these special signals shall be agreed upon and thoroughly understood by both the person giving the signals and the operator, and shall not be in conflict with the standard signals.



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#### TRAINING

Training shall include:

- Documentation of employee, date of training and subject matter, including method used to test knowledge of material.
- No employee shall operate cranes or equipment covered by this program until training has been complete and management has approved and designated him or her as a qualified operator.

#### COMMUNICATION

As per the company's Safety Management System Manual, and corporate communication policy, all applicable policies and procedures are reviewed with all new employees prior to engaging in any work activities (during orientation) and annually with seasonal/returning employees (refresher training).

Chief Elected Official

Chief Administrative Officer