

Hoisting and Rigging



CRITICAL PRACTICE



Rigging looks like an easy operation that requires no particular skill or experience.

If you think *"anybody can do that,"* you should think *"anybody can be seriously injured doing that."*

Pause for Safety

Hazards

- Equipment or material falling;
- Equipment or material shifting;
- Hands pinched in rigging;
- Overloading lifting equipment, tipping or collapse
- Inadequate rigging, breakage line of fire;
- Contact with overhead wires;
- Hand lacerations while working with a frayed cable;
- Workers being struck by load; and
- Workers caught between load and equipment.

PPE



Additional PPE



Controls

- Chains and slings;
- Hooks and shackles
- Guide hand-signals
- Two-way radios
- Measuring Tape

Strategies and Procedures

Only Trained workers are permitted to perform hoisting and rigging.

Plan the move

1. Determine the weight of the object or load prior to a lift to make sure that the lifting equipment can operate within its capabilities.



2. Select only alloy chain or cable slings.
 - NEVER exceed the working load limits.
 - Use slings of proper reach.
 - Never shorten a line by twisting or knotting.
 - With chain slings, never use bolts or nuts.
 - Inspect all slings thoroughly at specified intervals and maintain them in good condition.
 - Inspect each chain or sling for cuts, nicks, bent links, bent hooks, etc., before each use.
 - If in doubt, don't use it - destroy and discard.



3. Ensure that safety latches on hooks are in good working condition.
4. Balance the load
 - Estimate the center of gravity or point of balance.
 - The lifting device should be positioned immediately above the estimated center of gravity.



5. Identify the designated signalman by the use of distinctive vest, armbands, etc.
 - Ensure that the signaler is properly identified and is competent in the techniques of proper signaling.
 - Instruct the equipment operator to recognize signals from that person only.
6. Prepare a place to land the load.

- Remove unnecessary blocks or other objects that might fly up if struck by the load.

Lifting and moving

- If you must hold the sling or choker in position, be sure your hand is clear of pinch points.
 - Your hand should be far enough away so there's no possibility of a frayed wire catching your glove and jerking your hand into a pinch point.
 - (Frayed cables should never be used.)



- Each rigger must be sure he's in the clear before he gives an "all ready" to the signalman.
 - When you have positioned the sling or choker you're using, release it, if possible, before you give the "all ready" signal.
- The signalman must be careful not to order a move until he has received the "all ready" signal from each member of the crew.
- Make sure all personnel stand clear from the load being lifted.
 - Never permit anyone to ride the lifting hook or the load.
 - Never work under a suspended load unless the load is properly supported.
 - Keep from under the boom as much as possible.
- Never leave a load suspended when the hoist or crane is unattended.



- Make sure a tagline is used to control the load.
- Watch out for the roll or swing of the load.
 - Since it's almost impossible to position the hook exactly over the load center, there will almost always be a swing or roll.
 - Anticipate the direction of the swing or roll and work away from it.
- Never place yourself between material, equipment or any stationary object and the load swing.
 - Also, stay away from stacked material that may be knocked over by a swinging load.

Landing the Load

- Be sure your feet and all other parts of your body are out from under.
- Lower the load gently and slowly
 - Anticipate that if the load rolls on the blocking, it will be a slow shift that you can get away from.
- Make sure load is stable before slackening the sling or chain.

