



SHOP RIGGING & OVERHEAD HOIST SAFETY PROGRAM

Purpose & Scope

CLIMATE ENGINEERS, INC. (CE) is dedicated to the protection of our employees from occupational injuries and illnesses. The purpose of this program is to provide procedures to be followed to reduce the possibility of injury to employees from the hazards associated with overhead hoist operations as required by OSHA standard 29 CFR 1910.179 and applicable ANSI standards. This program covers the use of overhead bridge, jib, gantry and monorail cranes for work completed in the shops.

Definitions

crane – machine for lifting and lowering a load and moving it horizontally, with the hoisting mechanism an integral part of the machine.

hoist – a machinery unit that is used for lifting and lowering a freely suspended load.

jib – horizontal cantilever track on which the trolley and hoisting mechanisms travel.

monorail – single run of overhead track on which the trolley and hoisting mechanisms travel.

overhead bridge – a crane with a single or multiple girder movable bridge carrying a movable or fixed hoisting mechanism and traveling on an overhead fixed runway structure.

Responsibilities

Safety Manager

The Safety Manager has the general responsibility for the implementation and administration of this program.

The Shop Supervisor

The Shop Supervisor must verify that all existing and new cranes meet all applicable OSHA and ANSI standards.

The Shop Supervisor will be held responsible for the following:

- A. To maintain a current list of hoist present in the shops and label each hoist with a specific identification number.
- B. Add/delete hoists from the inspection forms as needed.
- C. To have each crane inspected at least once every two months using a preprinted form listing all cranes located at the shop.
- D. To have all hoists inspected annually by an outside entity specializing in hoists. The outside entity shall be informed that they must comply with the requirements outlined in 29 CFR 1910.179(j) and applicable ANSI standards
- E. While inspections, adjustments or repairs are being performed “Lockout/Tagout”, “Fall Protection”, and other safety procedures are to be followed as appropriate.

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Safety Manager & Shop Supervisor

The Safety Manager & Shop Supervisor are responsible for the following:

- A. To coordinate the training for this program and keep the appropriate documentation.
- B. To determine that inspections are performed and to keep on file inspection sheets for 4 years plus the current year.
- C. To follow up to determine that written recommendations or comments made during the daily, bimonthly, and annual inspections are resolved to the satisfaction of the Plant Manager.

Foremen

Foremen are to train and evaluate their employees using the materials provided in the attached exhibits.

Authorized Employees

Only those persons having been successfully trained and evaluated by their Supervisor shall be permitted to operate a hoist. Each operator is responsible for making a daily visual inspection of the equipment she/he operates. Defects are to be reported promptly to the Supervisor so that corrections may be made.

Training

All CE employees whose job requires them to operate a crane will receive training by their Foreman before operating cranes. Training and re-qualification will be done on an annual basis.

Foreman will train and evaluate their employees using the following exhibits that apply to the employees' area.

- Employee Training for Bridge, Jib, Gantry and Monorail Cranes

Manufacturer's representatives or other appropriate entities may provide training where specialized training is required.

General Equipment Guidelines for all Hoists

- A. New or modified hoists are to meet the applicable OSHA and ANSI standards.
- B. Trolleys for under hung hoists should be of the type having wraparound side plates to protect trolley wheels and act as an additional safety catch in the event of trolley wheel failure.
- C. The rated working load limit of the hoist shall be plainly marked on both sides and legible from the ground or floor.
- D. Lighting shall be sufficient to enable the operator to see clearly enough to perform his/her work.
- E. All operating controls are to be within convenient reach and allow the operator a full view of the load hook in all positions. Operating directional controls are to be clearly labeled.

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- F. Each independent unit of a hoist shall be equipped with a braking system meeting the requirements specified in 29 CFR 1910.179 (f).
- G. Stops and bumpers shall be provided at the limits of travel of the trolley. Stops engaging the tread of the wheel shall be at least as high as the wheel radius.
- H. The manufacturer's recommendation as to hooks, brakes, maintenance and other items should be followed. The manufacturer's literature should state that the equipment meets OSHA standards.
- I. All bridge cranes shall have a minimum clearance of 3 inches overhead and 2 inches laterally between the crane and all fixed structures within its area of possible movement.
- J. Weekly, Shop Foreman are required to complete the attached *Rigging & Hoisting Equipment Inspection Check-List*.



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RIGGING & HOISTING EQUIPMENT INSPECTION CHECK LIST

This form should be filled out each time you use rigging equipment. The completed form should be turned into your Climate Engineer's Safety Manager weekly. This is required documentation.

Inspection: Before each use, all equipment included but not limited to hooks, shackles, slings, chockers, chains, attachments, fasteners, etc must be inspected for damage or defects by a competent person. Damaged or defective equipment shall be immediately removed from service.

Competent Person Performing Inspection: _____ Date: _____

Jobsite/Location: _____ Task Being Performed: _____

In certain weather conditions, consider stopping lift/activity.

YES	NO	N/A	SHOP CRANES (GANTRY)
			Check for damaged, loose or missing parts
			Ensure that hooks, latches, chains show no signs of excessive wear or deformation
			Ensure that rated capacity is marked in a prominent location

YES	NO	N/A	RIGGING HOOKS
			Check for cracks, nicks and gouges
			Check for evidence of heat damage
			Check for deformation
			Check for excessive wear
			Check for damage from chemicals
			Is Safety Latch in place if applicable?
			Is Manufacturer's ID and capacity clear?

YES	NO	N/A	SHACKLES
			Check for cracks, nicks and gouges
			Check for evidence of heat damage
			Check for deformation
			Check for excessive wear
			Check for damage from chemicals
			Is Safety Latch in place if applicable?
			Is Manufacturer's ID and capacity clear?

YES	NO	N/A	EYE BOLTS & SWIVEL HOIST RINGS
			Check for cracks, nicks and gouges
			Check for evidence of heat damage
			Check for deformation
			Check for excessive wear
			Check for damage from chemicals
			Is Safety Latch in place if applicable?
			Is Manufacturer's ID and capacity clear?

YES	NO	N/A	WIRE ROPE SLINGS
			Check for wear or scraping of one third of original diameter of the outside diameter
			Check for kinking, crushing, bird caging

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			Check for evidence of heat damage
			Check for corrosion of rope or end attachments
			Check for end attachments being cracked, deformed or worn
			Is capacity clearly labeled?
YES	NO	N/A	ALLOY STEEL CHAIN SLINGS
			Check for Cracks, nicks and gouges
			Check for Evidence of heat damage
			Check for Deformation
			Check for Excessive Wear
			Check for Damage from Chemicals
			Is Safety Latch in Place if applicable?
			Is Manufacturer's ID and capacity clear?
YES	NO	N/A	METAL MESH SLINGS
			Check for broken wires
			Check for lack of flexibility due to distortion or rust
			Check for Max 15% reduction of original cross section area of metal at any point around a handle eye
			Check for Max 25% wire wear from abrasion
			Check for Max 15% wire wear from corrosion
			Is Manufacturer's ID and capacity clear?

YES	NO	N/A	SYNTHETIC WEB OR ROUND SLINGS
			See RED STITCHING –YOU'RE DEAD Immediately throw away.
			Check for acid or caustic burns
			Check for melting or charring
			Check for snags, punctures, tears
			Check for broken or worn stitching
			Check for excessive UV Ray damage
			Check for Manufacture ID, load, capacities, and original length.

YES	NO	N/A	READINESS FOR LIFTING LOAD
			Has PJHA been completed for this task, attach with form
			Have you reviewed daily conditions: weather, proximity to other works & other activities at site: <i>put brief description below</i>
			Have clear picking and landing areas been established along with a clear path with no persons in this path: <i>put brief description below</i>
			Who is involved in this lift and who is the ultimate lead authority for this procedure
			Have you spoken to the lift/crane operator – how is their awareness, do they approve of the load being lifted, etc.
			Do you have adequate form of communication: radio, hand signals, etc.
			Are you aware of each load weight and load center, have you inspected the materials through the packaging – is load sturdy
			Have you tested stability of this load – rigging it 1' above ground to check for shifts in load before sending
			How many lifts are to be made

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