

Crane: Overhead/Gantry

Definition: Overhead rail (bridge) mounted horizontally travelling crane (trolley) with vertical hoist lifting and moving capability of designated capacity with hook, sling, magnet, or bucket lifting mechanism(s).

Potential Hazards:

Falling Materials

Slips/trips/falls during cab access and inspection

Electric shock

Lacerations/hand injuries during cable/sling inspection

Noise

Swinging or suspended materials

Flammable liquids/vapors

Oil and hydraulic fluids

Moving parts/pinch points

Guarding/Shielding:

Cab is enclosed and often at heights requiring caged access ladder if over 20-feet or other suitable safe stairway and platform. Maintenance activity and inspections will require fall protection system if unprotected at heights.

Rail/wheel assemblies, if accessible by personnel during operation, require guarding to cover pinch points. Sweeps or similar rail/wheel interface protection may also be required if accessible by personnel.

Bridge or trolley require bumpers at each end.

Hoisting rope/chain may require guards at drum.

Accessible moving parts including gears, sprockets, reciprocating equipment and similar will require guarding if accessible.

Crane Operator should be sufficiently removed and protected from possible flying materials or swinging loads.

Protective Equipment:

Hard hats*

Safety glasses*

Steel toe/steel shank work boots*

Gloves as needed

Respirator as needed

*minimum requirements

Safety Procedures:

All electrical components must be grounded per NEC/OSHA requirements.

All equipment maintenance and inspection requirements must use Lock-Out/Tag-Out procedures by trained and authorized workers.

Elevated platforms or walking surfaces must have appropriate guardrails, mid-rails and toeboards, and be constructed of suitable materials and strengths.

Load lifting devices must be inspected regularly following suggested checklist attached.

Minimum crane clearances must include 3 inches overhead and 2 inches laterally.

Outdoor cranes must be equipped with a visible or audible wind velocity detector.

Items stored in the cab must be secured at all times.

Rated load limit of crane must be clearly marked on both sides, and rated load limits of hoist or load blocks must also be marked and visible from ground or floor.

Except for floor operated cranes, a gong or other warning signal must be provided for each crane equipped with a power travelling mechanism.

When starting the bridge and when the load or hook approaches near or over personnel the warning signal must be sounded.

Follow inspection requirements of attached form.

Designate a safe zone where workers can stand while crane is operating, and post signs indicating these safe zones and restricted areas.

Portable fire extinguisher must be mounted in the cab.

Audible signals must be described on posted sign(s).

Visual signals must be established and used by hook-up workers and crane operators.

Ground workers and crane operator must have communication method.

Crane operator must have unobstructed view of operations area at all times.

Crane must not be used to load containers or trucks unless all individuals are out of the vehicle cab and in a designated safe area.

Crane Inspection Checklist (daily inspection required at OSHA 1910.179)

| Inspected by: _____ Date: _____ | Yes | No | N/A |
|---|-----|----|-----|
| Check to see if crane or hoist has been locked-out/tagged-out | | | |
| Check that all motions agree with control device markings | | | |
| Verify proper brake operation – all motions | | | |
| Visually inspect hook for signs of deformation, wear, and safety latch operation | | | |
| Verify proper operation of hook latch assembly | | | |
| Visually inspect wire rope, load chain, or other lifting aids to assure no damage or excess wear (see separate sling checklist) | | | |
| Verify proper operation of upper limit switches | | | |
| Visually inspect for oil leakage | | | |
| Check that functionally all mechanisms for proper operation, sounds and movements are as they should be | | | |
| Make sure all signs, labels, and warnings are properly posted | | | |

Stop using crane immediately and inform supervisor/safety coordinator if any malfunction, unusual noise or unusual movement is observed.

Load only within crane capacity.

Inspect rigging daily.